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## ORIGINAL ARTICLES.

### A STUDY OF SIXTY CASES OF LOBAR PNEUMONIA OBSERVED IN BELLEVUE HOSPITAL, NEW YORK.<sup>1</sup>

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The cases on which these studies are based were observed in the wards of Bellevue Hospital. As occurs in all large charity hospitals most of the subjects were in an unfavorable condition to tolerate any serious disease. All cases, even of those patients who were moribund when brought into the hospital were included. Five of these died within twenty-four hours after admission, two being cases of septic post-partum, one a case of cancer of the pancreas, stomach, liver, and intestinal glands, and two were suffering from pulmonary edema. One case was that of a pregnant woman brought in during labor, the patient dying within half an hour after admission. Almost all of the patients gave a history of having been badly housed, insufficiently clothed, and poorly fed, and most of them were subjected to great exposure in their occupation. As will be seen in the summary, a large proportion of them were addicted to the use of alcohol to a greater or less extent. As an example of the conditions under which they were living before admission, five of the patients walked to the hospital after the beginning of their illness, two of them on the second, and two on the third day. In two instances of these the temperature was between 105° and 106° F. when the patients were admitted. One of these patients walked in the night a distance of two miles, another a distance of a mile and one-half, both on the third day of the disease, to reach the hospital. Of these five patients who walked to the hospital, two died soon after admission from pulmonary edema; the other three recovered, the pneumonia in these three cases running a fairly regular, typical course.

It will be noticed that only two of the patients had pleuritic effusion as a complication, and in not one of the 60 cases did an empyema occur as a sequel, rather an unusual experience in 60 cases of pneumonia observed in hospital practice. Another unusual feature is that of the 9 patients more than fifty

years of age only 2 died. Four who were between sixty and eighty recovered. The age of greatest mortality was that between thirty and fifty, 12 of the 17 deaths occurring between those ages.

As occurs in a very large proportion of the cases in large charity hospitals, complications or co-existing diseases were present in most of the cases, and in all but 1 of the 17 fatal cases. Several of the patients had been sent in to the alcoholic ward of the hospital and developed pneumonia after admission, whereupon they were transferred to the medical wards.

The highest temperature observed was usually on the day of admission to the hospital, due probably to the exertion and excitement attendant upon the moving of the patient. The highest temperature observed was 105.8° F., in a patient who had just been admitted. In two fatal cases the temperature at no time reached 102° F., but in these cases the pulse was rapid, feeble, and irregular from an early stage of the disease. Chronic nephritis was a very frequent complication and was present in five of the fatal cases.

Of the sixty consecutive cases of pneumonia treated in my service at Bellevue Hospital during the season of 1897-98, there were forty-two men and eighteen women. Of these seventeen died, being 28½ per cent.

Age.	Died.
Under 20 years.....	1
20 to 30 "	18
30 " 40 "	23
40 " 50 "	9
50 " 60 "	5
60 " 70 "	3
70 " 80 "	1
	60
	17

Nativity.	Died.
United States.....	19
Ireland.....	23
Germany.....	6
Italy.....	4
Austria.....	2
England.....	3
Russia.....	1
Hungary.....	1
Scotland.....	1
	60
	17

Occupation.	Died.
Housework.....	10
Laborers.....	15
Domestics.....	7

<sup>1</sup> Abstract of a paper read before the New York Clinical Society.

Occupation.		Died.
Porters.....	5	0
Peddlers.....	2	1
Butchers.....	1	0
Cooks.....	1	0
Ironworkers.....	1	0
Drivers.....	3	0
Brushmakers.....	1	0
Stablemen.....	3	1
Waiters.....	7	2
Bookkeepers.....	1	1
Horseshoers.....	1	0
Stenographers.....	1	1
Tailors.....	1	0
	60	17

*Habits.*—Alcoholics (marked), 38 (male 33, female 5); moderate drinkers, 14; temperate, 8.

*Conditions Preceding the Attack.*—Exposure, 22; exposure and heavy drinking, 14; debility, 4; following a "cold," 3; submersion in water after heavy drinking, 1; post-partum sepsis, 2; indefinite, not known or no history, 13; following fracture of ribs, 1.

*Onset of Disease.*—Chill with rigor, 23; chilliness, 24; doubtful, 9; no chill, 4.

*Termination.*—Crisis, 27; lysis, 19; died before determined or had complicating disease, 14.

Of 27 cases ending in crisis the crisis occurred on the fifth day in 2, seventh day in 14, eighth day in 1, tenth day in 1, and day not known (previous history indefinite) in 9.

*Involvement.*—Right lung entire, 1; right upper and middle, 1; right upper and right lower, 6; right lower and middle, 2; right and left upper and lower, 2; right lower and left lower, 2; wandering, right lower, right upper, and left upper, 1; left upper and left lower, 3; left upper, left lower, and right lower, 1; right upper, 7; left upper, 5; right lower, 13; left lower, 14; middle lobe, 2.

Of 12 apex cases 5 were fatal, and of these 5 fatal cases 4 patients were forty years of age or over. Of the five fatal apex cases 4 patients were markedly alcoholic. Of 29 cases in single lower lobes or middle lobe 7 were fatal.

Of the 60 cases recorded 23 patients had marked delirium. Of the 12 apex cases 8 patients had marked delirium. Of the 29 single lower-lobe cases 13 patients had marked delirium. Of the 12 apex cases 5 patients had other complications than delirium.

An upper lobe, with or without a lower lobe, was involved in 26 cases out of 60 and 8 deaths out of the total 17 occurred from these 26.

Albumin, at least a trace, was found in the urine of all the patients where opportunity for examination occurred except in 4 cases. One patient was six-months' pregnant and went to full term.

Cold compresses to chest in 10, to abdomen in 2

cases, every hour in the daytime, every two or three hours at night.

Of the 60 cases recorded 38 subjects were large consumers of alcohol. Of the 17 fatal cases, 14 patients were distinctly alcoholic, 1 was a moderate drinker, and the remaining two were women—one a septic post-partum (hopeless) case, the other chronic nephritis.

Of the 60 patients 22 had no complication nor marked delirium. Of the 17 fatal cases all but 1 patient had serious complications or coexisting diseases.

*List of Complications or Coexisting Diseases.*—Marked delirium, 23; chronic endocarditis, 2; typhoid fever, 2; tuberculosis, 3; chronic nephritis, 7; pregnancy, 2; pleurisy with effusion, 2; carcinoma, 1; post-partum sepsis, 2; pericarditis, 1; fractured rib, 1; erythema nodosum, 1.

*Treatment.*—All of the patients were given water to drink. Indeed, they were urged to take water very freely. During the acute stage the diet consisted chiefly of milk, broths, soups, jelly, and eggs, when the patient was able to take them. Kumyss and matzoon were also allowed. When pain was a marked feature during the first days of illness morphin was used sufficiently to relieve it. In some cases in which pleurisy was a complication and the pain severe adhesive-plaster straps were applied to the side to restrict movement. As most of the patients were alcoholic and delirium was a prominent feature, with wakefulness, hypnotics were used, but always with care, the choice of these depending somewhat upon the amount of delirium. In some of the cases 20 to 30 grains of chloral amid at night gave satisfactory results. In others a combination of bromid with moderate doses of morphin seemed to work more satisfactorily. Sulphonal and trional were also employed in the early stages in some cases and apparently produced no depressing effects, but, on the contrary, refreshing sleep resulted. Alcohol in the shape of whisky was used in a large proportion of cases, but more especially because the patients were alcoholic and on account of its sedative effect rather than as a cardiac stimulant. The quantity of whisky varied from 4 to 8 ounces in the twenty-four hours, but in a few cases this quantity was increased to 10 or 12 ounces.

Cathartics were used as indicated and as a routine practice in cases which were seen early in the development of the disease.

Of the coal-tar preparations, a combination of phenacetin and caffein was employed in some of the cases seen early in which there was severe headache, dry skin, high temperature, severe muscular pain, and marked restlessness. This was given in small

doses, phenacetin 5 grains and caffeine 1 grain, and repeated every three, four, or five hours, the indication being the moderate reduction of temperature, if along with this reduction the unpleasant symptoms mentioned were decidedly relieved. This combination was not used in any instance after the third day. Digitalis was used only in cases in which there was valvular cardiac disease with predominant dilatation and because of this condition of the heart.

Strychnin and glonoin were used in a large proportion of the cases as a routine and from the beginning of the treatment. Strychnin was given in doses of from  $\frac{1}{80}$  to  $\frac{1}{10}$  of a grain every three or four hours according to the severity of the case and the effect produced. Glonoin was given every two hours in the daytime and every three hours at night in doses of  $\frac{1}{60}$  of a grain.

Baths in the form of the bed-bath or sponge-bath were given in cases in which there was high temperature (above  $103^{\circ}$  F.) and marked restlessness. No plunge-baths were given. These baths were not given at regular intervals, but according to indications, *i. e.*, temperature of  $103^{\circ}$  F. and over with marked restlessness. The temperature of the baths ranged from  $75^{\circ}$  to  $65^{\circ}$  F. In ten cases compresses were applied to the thorax at a temperature ranging from  $75^{\circ}$  to  $65^{\circ}$  F., the indication being the same as for the giving of the bed-bath or sponge-bath. So special pains were taken in the fitting of the compresses. A sheet doubled four times was dipped in water at the temperature named and was then wrapped around the patient from the axillary region down to the hips. The temperature of the water varied with the temperature of the patient. The compress was applied to the thorax because this was the most convenient region and not because it was believed that it would produce any special effect upon the process going on in the lungs, but rather for its effect as an external application of cold. It was noticeable that in the cases in which the compress was applied there was at first objection on the part of the patient, but within twenty-four hours it would be asked for and welcomed. The compresses seemed to reduce the temperature, diminish the frequency and increase the force of the pulse, quiet the nervous system, and produce refreshing sleep. Almost invariably the patient said that he was more comfortable after the compresses had been resorted to.

In two instances, as a matter of experiment, these compresses were applied around the body from the lower part of the thorax down to the thighs, over an area corresponding in size to the thoracic region, with the result that they had the same effect as when

applied over the thorax. It is simply a modification of the bath and seemed to act by stimulating the respiratory and circulatory centers, reducing temperature, and quieting nerve perturbation.

In cases in which pulmonary edema developed or in which cyanosis was a marked feature, inhalation of compound oxygen gave great relief. This was administered freely for from six to eight minutes at a time at intervals of from half an hour to two hours, depending upon the severity and persistence of these two symptoms.

#### A FURTHER REPORT ON SOME INTERESTING CASES OF VARIOUS FORMS OF ANEMIA.

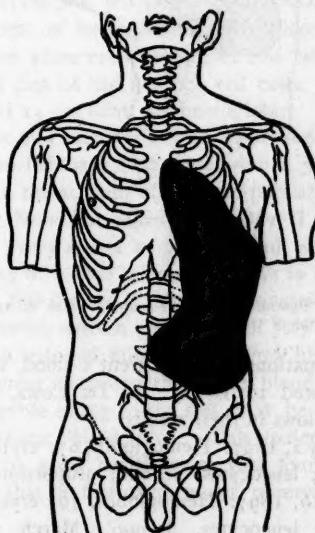
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In the MEDICAL NEWS for March 27, 1897, I published the histories of a number of cases of anemia, on the further progress of which I desire to report at this time. I also wish to record another case of considerable interest from a number of points of view. Perhaps the most interesting case, however,

FIG. 1.



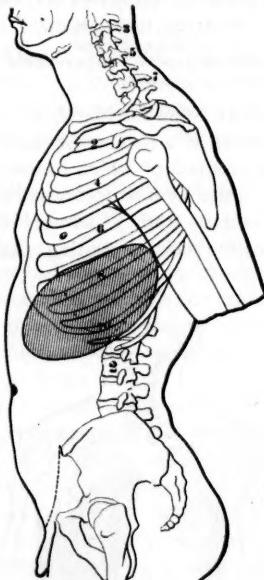
D. M. B. Splenomedullary leucemia. January 12, 1897. Slightly shaded portion shows area of cardiac and splenic dulness on percussion. The dark portion near the umbilicus shows the additional splenic area discoverable on palpation.

is that of D. M. B., who suffered from the spleno-medullary form of leucemia, this report concerning him being fourteen months after the report already referred to, and nearly two years after he first came under observation. The report in the MEDICAL NEWS indicated an extraordinary improvement during the three months he had been under treatment,

the white cells decreasing from about 500,000 to 19,000, the red cells increasing from about 2,300,000 to 4,000,000, and the hemoglobin from about twenty-five per cent. to more than sixty per cent. The area of splenic dulness was also diminished to an extraordinary degree.

At the present time the patient is ruddy looking, has been at his work for nearly eighteen months, and is very healthy in his general appearance. His spleen is smaller than at the last report, as indicated in the drawings reproduced in this article, the latest having been made on March 31, 1898.

FIG. 2.



D. M. B. Splenomedullary leucemia. Size of spleen after fourteen months of treatment.

The examinations of this patient's blood, for which I am indebted to Dr. J. C. Da Costa, Jr., have been as follows in their results:

February 2, 1897: Hemoglobin, 67; erythrocytes, 4,000,000; leucocytes, 19,000; proportion, 1-210. February 16, 1897: Hemoglobin, 70; erythrocytes, 4,100,000; leucocytes, 80,000. March 3, 1898: Hemoglobin, 70; erythrocytes, 2,500,000; leucocytes, 44,000. Of the 44,000 white cells, 70.8 per cent. were polymorphonuclear cells, 6.8 per cent. small lymphocytes, 5.6 per cent. large lymphocytes, 2 per cent. eosinophiles, and 14.8 per cent. myelocytes. No transitional cells.

March 31, 1898: Hemoglobin, 82; erythrocytes, 4,800,000; leucocytes, 32,000. Of the 32,000 white cells 77.5 per cent. were polymorphonuclear cells, 4 per cent. lymphocytes, 8 per cent. large

lymphocytes, 4.8 per cent. eosinophiles, 2.4 per cent. myelocytes, and 3.10 per cent. were transitional. Of the red cells there were 9 normoblasts, 25 megalocytes, and no poikilocytes.

The great difference in the white cells on the dates last named was not represented by the patient's appearance, as he seemed hearty and well, although he returned on March 3rd to make sure that he was not retrogressing, as he did not feel quite so well. On March 31st he expressed himself as feeling perfectly well, returning only because he had been directed to do so. He now considers himself perfectly well.

This case is extraordinary in that while all the symptoms were at one time very marked, his life and usefulness has been prolonged for a long time, and his health is so good. He has been using arsenic in full doses with some constancy, this drug having been of great benefit from the inception of his treatment.

The second case, that of splenic anemia, J. D., was referred to as follows in my original paper: "The large number of lymphocytes (eighty-four per cent.) in this case would apparently place it under the head of that somewhat rare type of leucemia called lymphatic leucemia, but there is an entire absence of enlargement of the lymph-glands, and, what is far more important, the increase in lymphocytes is purely relative, the total number of white cells being actually lower than normal. Aside from this state of the white blood-cells, the case might well be classed with what has been called pure splenic anemia, or splenic pseudoleucemia. Thus, we find the enlarged, and at times painful, spleen, the fact that the disease is commonly found at this patient's time of life, and in his sex, and that the anemic fever has also been present. Further than this, in splenic anemia we often have a decrease in the number of red cells to one-half, with a similar falling off in hemoglobin. Banti has regarded this state as a purely splenic form of pseudoleucemia, or Hodgkin's disease."

He reentered the wards of the Jefferson Hospital on February 22, 1898, and stated that after leaving the hospital he had continued taking ferratin three times daily, and attended the out-patient department until the following June. Then he stopped taking medicine, but did no work until July, when he resumed his vocation as barber, and had continued working at that until the day of admission. Since leaving the hospital he had felt entirely well until a week previously, February 14th, on which day he had quite a severe attack of epistaxis from the left nostril lasting about five minutes. On the same day he also felt pain and tenderness in the region of the

spleen. The epistaxis had recurred nearly every day since, sometimes coming on while in bed, and the pain in the splenic region had progressively increased in severity. During the previous week he had suffered from slight headache upon arising in the morning. During the previous three days the pain had been most severe in the median line about two inches above the pubes. He stated on the day of admission that he had had no headache, no epistaxis, and that splenic tenderness was not so severe as on the day preceding. His temperature was  $98\frac{3}{4}$ ° F., his pulse 86, and his respirations 22. The urinary examination on February 23, 1898, was negative. The blood examination on February 23, 1898, showed the color index 1.25, hemoglobin 40 per cent., red cells 1,620,000, white cells 7000. A differential count showed polynuclear cells 58 per cent.; small lymphocytes, 17 per cent.; large lymphocytes, 19 per cent.; transitional, 2 per cent.; eosinophiles 2 per cent., and myelocytes 2 per cent. On February 28th it was noted that since entering the hospital he had had no epistaxis, and the splenic pain and tenderness had entirely disappeared.

In June, 1898, he again entered the wards, with extraordinary pallor, dyspnea, and splenic pain. His blood examination gave the following result: Polymorphonuclear cells, 66 per cent.; lymphocytes, 26 per cent.; eosinophiles, 4 per cent.; transitional cells, 2 per cent.; myelocytes, 2 per cent., and there were poikilocytes, macrocytes, microcytes, normoblasts, and gigantoblasts. The total hemoglobin was 25 per cent., red cells 1,800,000, and the white cells 7000. This man has now had a number of these relapses, but in each instance they have occurred after hard work, and he has recovered as soon as he had rest and good food. He has at no time been well, but has earned a living.<sup>1</sup>

The third case, that of F. R., is of considerable interest. As recorded in my earlier paper, already referred to, he entered the Jefferson Hospital in May, 1894. His family history and his previous history were good except that when he was twenty years of age he had had a severe attack of serous diarrhea, and that fourteen years before he had had croupous pneumonia, from which he made a good recovery. In April, 1893, he began to have nausea with occasional attacks of vomiting, with poor appetite, and his skin became quite yellow. Diarrhea also came on. At this time, after the temporary improvement in his condition, he progressively became worse, and on May 18th he presented a markedly anemic appearance, the lips and ears being almost

bloodless, and the tongue pale. His temperature ranged from  $99^{\circ}$  to  $101^{\circ}$  F., and the respirations from 24 to 30. The conjunctivæ were infiltrated with a lemon-yellow fat, and there were numerous fresh and old hemorrhages into the retina. The veins and arteries of the retina could scarcely be distinguished on account of the pallor of the blood. There was a soft systolic murmur at the base of the heart and at the second left costal cartilage. In other words, the patient had every appearance of one suffering from pernicious anemia.

An examination of his blood revealed only 973,-000 red cells and 7000 white, the hemoglobin being 15 per cent. A month later the red cells numbered 664,000, the white 5000, and the hemoglobin was 10 per cent. He was placed on ascending doses of arsenic, with the result that his blood steadily improved, so that on September 12th the red cells were 3,800,000, the white cells 10,000, and the hemoglobin 60 per cent. He was then discharged, in September, 1894, and went to work again in the pine forests of Pennsylvania, but was readmitted on August 28, 1896, with all his old symptoms present. An examination of his blood on September 1st showed 1,180,000 red cells, 5000 leucocytes, and 35 per cent. of hemoglobin. His blood progressively grew worse until September 22d, when it was recorded that he had 886,000 red cells, 3800 white cells, and 23 per cent. of hemoglobin. Full doses of arsenic and sulphate of iron improved his blood so that on February 18th there were 4,360,000 red cells. In the account of his case published in the MEDICAL NEWS for March 27, 1897, I said: "He presents every aspect of being cured, although the possibility of a fatal relapse is always to be remembered in this disease." In this connection the following letter, written under date of July 2, 1898, in reply to a letter of mine in regard to his health, is of very great interest, although no blood count has been possible owing to the fact that he lives at a distance from Philadelphia. This patient considers himself in good health more than four years after the time that he first came under observation. He writes:

"Yours of a recent date is before me, and in reply would say that I am very much improved from the time of leaving Jefferson Hospital, and weigh at the present time 205 pounds, the only apparent trouble at present being some soreness in chest and feet. If you could suggest any remedy for my feet and chest, please advise."

The fourth case, the patient ill with pernicious anemia (S. S. D.), died in November, 1897, having steadily failed during the preceding six months. No autopsy was allowed. His hemoglobin, which, on

<sup>1</sup> This patient presented himself in my office December 10th, and stated that he was quite well. His object in calling was to ask for "any kind of work."

February 24, 1897, was 35 per cent., fell to 28, then in another month had risen to 45 per cent., and a month later was 35 per cent. It fell finally to 20 per cent. His red cells fell from 2,250,000 to 1,108,333, then rose to 1,850,000, and then fell to 1,225,000. Poikilocytes were numerous, but normoblasts and megaloblasts were absent. This case simply illustrates the temporary improvement and final fatal ending of ordinary pernicious anemia.

The sixth patient (Case V.) died, and his case has already been reported.

The last case I shall report in this paper has not been reported before. It is one of splenic leucemia. It is interesting because, being a private patient, he was under continuous observation for nearly fourteen months, and many blood counts were made. The autopsy, also, was of unusual interest.

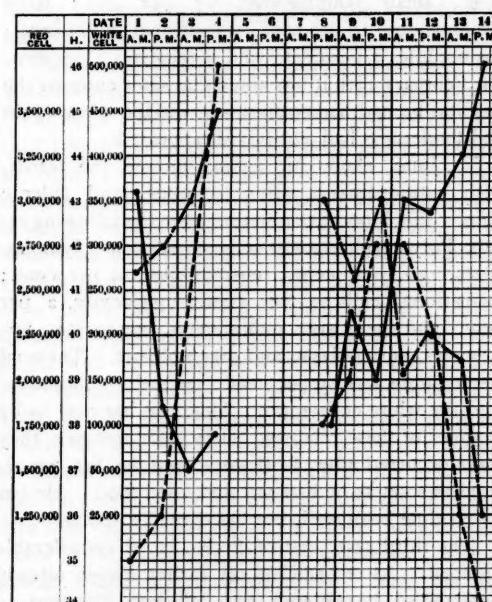
A. B. C., aged forty-one years, came under my care in April, 1897. His family history was entirely negative. He had the usual diseases of childhood and enteric fever at nineteen, from which he made a perfect recovery. In 1881 he was greatly exposed to cold and wet, and suffered from subacute rheumatism of an articular type, which persisted more or less severely up to the time I saw him. The knees and ankles were the parts most involved. In 1883 he had a severe attack of croupous pneumonia, and since 1892 had had several attacks of influenza. In 1887 he contracted syphilis, but was treated for it rigorously for twelve months, and had no lesions except the primary sore. The patient had always used alcohol freely. In January, 1895, he began to suffer from pain in the left side in the splenic area, and began to lose weight in March, 1895, when the spleen was found decidedly enlarged.

On April 10, 1897, when first seen by me, the splenic and hepatic swelling was very great. His girth at the umbilicus was forty-two inches, and from the tip of the ensiform cartilage to the lower edge of the spleen in the middle line was fifteen and one-half inches. The right edge of the spleen reached four inches to the right of the median line at the navel. There was edema of both legs, chiefly the left, owing to the pressure of the splenic tumor. His pulse was 84, soft and compressible, and auscultation revealed a systolic murmur, soft in character and characteristic of anemia, at the aortic and pulmonary cartilages. The urine was negative. At this time his blood showed the following changes: Hemoglobin, 35 per cent. of normal; erythrocytes, 2,640,000 per c.mm.; leucocytes, 395,000 per c.mm.; lymphocytes, 10 per cent.; mononuclear leucocytes, 12 per cent.; polynuclear leucocytes, 60 per cent.; eosinophiles, 8 per cent., and myelocytes, 10 per cent. There was slight poikilocytosis.

From this time on examinations of the blood were constantly made, at times as frequently as once every week. The accompanying chart clearly indicates the results of these counts during a period of four-

teen months. It is interesting to note that under the use of ascending doses of arsenic and iron there developed a progressive improvement in his blood as to an increase in hemoglobin and red-cells, and a decrease in leucocytes. The lines on the chart show how the white cells decreased as the red cells and hemoglobin increased during the early months. While no counts were made during August, September, and October, he continued the treatment in a modified dosage, so that on his return to my care in November he was in fair condition. It is interesting to note, also, that as the red blood-cells fell in November the white cells increased, and when the large doses of arsenic were repeated and he was under their influence, the red cells and hemoglobin increased and the white cells decreased a second time. Finally, when, in January, he could no longer take full doses of arsenic because his stomach rebelled and his face be-

FIG. 3.



WHITE CELLS ARE REPRESENTED BY  
RED CELLS " "  
HEMOGLOBIN IS " "

Blood chart of A. B. C. Fatal case of splenic leucemia.<sup>1</sup>

came puffy, the white cells progressively increased, and the red cells and the hemoglobin greatly decreased until he died. With noteworthy constancy, in the entire progress of the malady the hemoglobin rose and fell with the red cells, and the white cells fell and rose in inverse ratio. A few days before his death the hemoglobin was twenty-eight per cent., the red cells 1,800,000, and leucocytes 706,000.

*Notes of the Autopsy.*—Body of an emaciated male, with rigor mortis moderately marked. The

<sup>1</sup> The names of the months during which the blood examinations were made should be substituted at the head of this chart for A.M. and P.M.—[ED.]

abdomen was greatly distended, and there was edema of the feet, legs, penis, and scrotum. On making an abdominal incision, scarcely any subcutaneous fat was encountered; the muscles of the abdominal wall were very pale and friable. The abdominal cavity contained 2000 c.c. of clear yellow fluid. Beneath old scars on the abdominal wall were numerous peritoneal adhesions; these scars were the result of frequent tapping. The peritoneum was somewhat thickened and reddened, and more opaque than normal. The surface of the omentum was roughened, and scattered over its surface were numerous tumor-like enlargements of an average diameter of 1 mm. The lower margin of the liver in the right mammary line extended 5 c.m. below the costal margin; the upper margin extended to the upper margin of the fourth rib; the left lobe of the liver extended downward 10 cm. below the ensiform cartilage; the left margin of the left lobe extended to the left 5 cm. beyond the left nipple line. The lower border of the spleen extended downward to within 7 cm. of the symphysis pubis; the right margin extended to the level of the nipple. The stomach lay in the angle formed by the separation of the inner borders of the liver and spleen, which was on a level with and just to the right of the umbilicus. This viscous was, therefore, pushed downward, forward, and to the right of its normal position. The transverse colon was pushed downward and occupied a position just anterior to the stomach; the left half of the transverse colon lay beneath the lower border of the spleen, and was consequently much prolapsed. The right pleural cavity contained 100 c.c., of clear yellow fluid, but was otherwise normal, as was its fellow. The pericardium was normal, and contained 20 c.c. of clear yellow fluid. The heart was large and very flabby; the left side was slightly contracted. The heart substance was pale and moderately friable. The right auricle was punctured and cultures made from the blood. The small amount of blood which exuded was fluid and light in color.

The spleen was enormously enlarged. It weighed 5500 grams (about 14½ lbs.). Its transverse circumference was 48 cm. (20 inches), and its longitudinal 86 cm. (34½ inches). The organ was decidedly notched on its inner and outer borders. Over its surface were numerous white scars of irregular outline and size. On section its substance offered great resistance to the knife, it being much tougher than normal. As regards color, the substance presented the usual peculiarities. In situations where scars occurred it was found that this tissue extended down into the substance of the organ; these masses of scar tissue were irregularly pyramidal in form, the apices extending toward the central portion of the organ; they had the appearance of the remains of old infarcts. The splenic substance for perhaps a millimeter around these areas was much redder than in other situations. The liver was enormously enlarged, weighing 6300 grams (approximately sixteen pounds, ten ounces). On section it was seen to be pale in color and

of normal consistence. The adrenals were somewhat enlarged and darker in color than usual, the substance of normal consistence. The left kidney was displaced to the right, and lay in front of the spinal column, its long axis parallel to that of the spinal column. Over the surface of this kidney there were numerous cysts from .5 to 3 cm. in diameter. The substance was pale and quite tough. The pyramids were not well marked off from the cortical portion, which was somewhat diminished in amount. The weight was 250 grams. The right kidney, with the exception that there were no cysts on the surface, was in the same condition as its fellow; weight, 285 grams. The ureters were normal. The bladder contained a considerable quantity of opaque urine. Its walls were extremely thin, but otherwise the viscous was normal.

The stomach and intestines were normal. Within the entire alimentary canal dark, grumous masses were found, which were evidently more or less altered blood. Within the mesentery several enlarged lymphatic glands were found; they were generally of a uniform faintly reddish color, and contained but little fluid. In one instance, a gland was found, the substance of which was rather grayish in color, and scattered through its substance were numerous hemorrhagic areas.

A section of the right femur was made, and the bone was found to be very hard. The marrow was much firmer than usual, and was of a reddish-gray color. It seemed to be less firmly attached to the surrounding bone than usual.

Allowing for the temporary improvements seen in the life history of ordinary cases of splenic leucemia, this patient certainly greatly improved and finally held his own for a time under full doses of arsenic. This was shown in the patient's general health, by his blood, and was recognized by himself. While this disease is one with a necessarily grave prognosis, the fact that arsenic can so completely check its progress and improve the condition of the patient, at least for a time, is of great interest.

#### INTESTINAL OBSTRUCTION DUE TO INTUS-SUSCEPTION AND VOLVULUS.<sup>1</sup>

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AND ST. MARK'S HOSPITALS.

DR. EDWIN MARTIN, in a paper read before the Philadelphia Pediatric Society on November 9, 1897, stated that he was particularly impressed with the rarity of intussusception, as out of eight hundred personal communications sent out by him, most of them being answered, the returns brought him records of but fifty-four cases, and that men of the

<sup>1</sup> Read before the New York State Medical Association, October 19, 1898.

widest experience in surgery, medicine, and pediatrics reported that they had never seen a case. Such a statement is apt to be not only misleading as to the frequency of this disease, but also has a tendency to create an undesirable impression of diagnostic acumen upon the profession at large. It has been the fortune of the author to see four cases within a period of four-weeks' time, during February and March of this year, and three more cases within the three years preceding, while a typical chronic case came under his observation a number of years ago, and two cases, chronic in nature and due to malignant growths, were seen in the practise of a brother surgeon during the past year and a half; in addition two cases were reported to him during the first half of the year. Such a series of cases under the observation of a single operator tends to the belief that the disease is much more frequent than most authors admit.

Cases of intussusception may be classified according to their intensity after the manner of Raffinesque, as *ultra-acute*, death occurring in twenty-four hours; *acute*, terminating within the first seven days; *sub-acute*, lasting from two to four weeks, and *chronic*, lasting from three weeks to months before a fatal determination.

Intussusception is the cause of fully thirty per cent. of all cases of acute obstruction. The greatest proportion of cases of intussusception, fully fifty per cent., occur in children under ten years of age, and of these more than fifty per cent. occur in infants under twelve months. Between the ages of five and forty to fifty the number of cases diminish, and after forty or fifty the frequency of occurrence is again noted. This condition may be explained upon the grounds of periods of debility, occurring in infancy and extreme adult age.

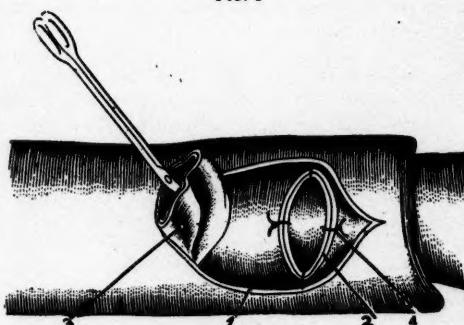
Anatomically the following varieties of intussusception will answer: The *ileocecal*, in which the ileocecal valve forms the apex of the intussusception; *ileocolic*, in which it is made up of ileum and cecum passing into the colon, and the *ideal* or *enteric* variety made up entirely of small intestine. Of these the enteric is the most frequent. Very frequently upon autopsy intussusception is found that is due to post-mortem changes and not to any condition existing before the death of the patient. These cases can readily be excluded by their previous history.

The causative factors of intussusception are variously ascribed to former conditions of health or preceding physical conditions; conditions causing diarrhea; factors of a pathologic origin, and factors that originate in the anatomy of the intestine. Factors of an anatomic origin include long and lax mesentery, although the author has been unable

to demonstrate the existence of such an anatomical condition in any of his cases. Another of the anatomic causes and the one receiving greatest weight is the musculature of the intestinal coats. These muscle-fibers, the longitudinal ones primarily and the circular secondarily, produce the intussusception through irregular peristalsis in the following manner: Contraction of the longitudinal fibers occurs with a retraction of a portion of the gut from below into the part undergoing the irregular peristalsis; after a time contraction occurs in the circular fibers when a grasping of the intussusception takes place, which may and frequently does continue to such a degree as to produce strangulation. It is this contraction of the circular fibers that prevents the reduction of the mass in the irreducible non-strangulated and gangrenous types.

Among the pathologic causes are tumors, usually of the internal coats, which by their weight produce

FIG. I



Barker's operation.

1. Incised intussuscipiens.
2. Proximal end of intussusceptum.
3. Distal end of intussusceptum.
4. Suture in entering and returning gut.

the irregular peristalsis. These are chiefly polypi and endotheliomata; also imperfections in the intestines, as Meckel's diverticulae. One case was reported by the author in the *New York Medical Journal* of April, 1898, the history of which is included in this paper. Another of these cases of Meckel's diverticulae as the causative factor in this disease occurred recently in the practice of a fellow surgeon.

Under the preceding physical conditions, it is stated that a child of robust physique is less liable to suffer from this condition than one more puny and delicate. Our cases do not lend any weight to this argument, as we find that the majority were well-nourished children. Former conditions of health, barring a process which is accompanied by diarrhea or by a pathologic condition of the intestines, apparently cannot be considered as factors of any

great importance, except in patients in whom debility is well marked; these having less resisting power to intestinal diseases. It would seem to the author that all conditions and factors which tend to produce diarrhea and vomiting are primarily the cause of the irregular peristalsis, excluding, of course, those cases classed as distinctly pathologic in origin, and these causes are changes of temperature, exposure of the abdomen, due to insufficient clothing during the day and improper protection at night; foodstuffs that disagree (and here we must include the artificial foods, as many children cannot take some of these without evil effects, as well as unripe or decayed fruits, tainted meats, etc.), and finally injudicious feeding by overloading the stomach, as seen in many children; also, insufficient precaution in preparing foods, etc.

The symptoms and signs of intussusception are pain, vomiting, tenesmus, blood in the stool or a bloody mucus dejection, restlessness, tumor, and later, manifestations of obstruction, peritonitis, and sepsis. Pain has been an ever-present symptom in the author's cases. The abdomen is tender to the touch, manifested by the patient if too young to speak by flinching or crying upon palpation. Vomiting has been present in but three cases and these were the cases of more than twenty-four-hour's duration when seen by the author. It is well to remember that in many of these cases the onset is frequently preceded by diarrhea and vomiting, so that in many of the cases in which vomiting was an early manifestation it may have been but an accompaniment to the pre-existing condition of health.

There may be, and frequently is, an evacuation of more or less extent, due to feces in the intestine below the seat of the intussusception. This evacuation is not accompanied by blood or bloody mucus. Later there are passages which consist of blood and mucus or may be largely composed of blood or mucus simply tinged with blood. The presence of blood is readily ascribed to the obstruction producing strangulation of certain parts of the vessels and increasing arterial and venous pressure sufficient to produce hemorrhage by diapedesis and even by rhexis. Tenesmus is frequently observed following the first few passages. The patient does not lie quietly in bed during the early hours of the disease, but is constantly tossing and moaning and continues doing so until the gut is reduced or until gangrene and sepsis are established. If after an injection the restlessness and moaning cease, *i.e.*, during the first twenty-four to forty-eight hours, it can be safely stated that reduction has taken place.

The proverbial sausage-shaped tumor cannot be found in all instances. In the case of three patients,

operated upon by the author and palpated by most able diagnosticians, no tumor was to be felt through the abdominal wall, but the symptom-complex was so perfect of intussusception that abdominal section was performed and a tumor found. The reason was readily explained as in two cases the tumor was found well under the ribs in the left hypochondriac region and in the third well under the right lobe of the liver. Digital examination frequently proves the presence of this condition, as the palpating finger comes in contact with the mass in the rectum. In one of the author's cases, in which no tumor was palpated externally, it was thought that the very tip of the finger came in contact with a fold of intestine foreign to the anatomy of that part. This disappeared upon injection. The child became quiet and slept for eight hours, when it again became restless and had another pink mucus dejection. Nothing was felt upon digital examination but upon

FIG. 2



Paul's operation.

1. Incision through intussuscipiens.
2. Incision through intussusceptum.
3. Ligature above the metal tube.

opening the abdomen the tumor was found in the left hypochondriac region.

Later the symptoms become aggravated, obstruction is complete, the pulse is rapid and feeble, and all the manifestations of peritonitis and sepsis are present.

The treatment consists of mechanical, expectant, and operative procedures for the relief of the intussusception. Under the mechanical methods we have the use of air and water distention of the bowel. The danger incurred in the use of air is an over-distention with rupture of the intestine. Little can be said in favor of this method of reducing the intussusception as it does not have the mass-like pressure action that is produced by the use of water. As the pressure cannot be gaged as easily as when using water, the method should be passed over at the present date. Enemata of water to be successful should be used during the first twelve or twenty-four hours, *i.e.*, before adhesions form, but in all cases of no matter what duration, it should be used first, bearing in mind the fact that the reservoir should not be more than four feet in height from the body

of the patient. These are best given with the patient in the inclined posture or suspended by the feet. Although water passes the ileocecal valve with great ease in the cadaver and has been demonstrated time and again as passing in the living, it should be borne in mind that enemata are prone to prove unsuccessful in cases in which the tumor is above the transverse colon. This is due to the fact that when the tumor is above the transverse colon, the effect of the water pressure is more of a pulling action upon the receiving gut than of a driving action upon the apex of the intussusception. Massage of the abdomen and the tumor, when found, should be done while the water is being introduced. Although the dangers of the use of water are similar to those of air, they are less prone to occur, owing to the weight pressure upon the apex of the tumor being followed more frequently by reduction than by the use of air. It cannot be too strongly stated that this type of taxis should not be used with any greater degree of frequency or duration than manual taxis in a strangulated hernia; for the conditions are certainly allied. Should the injection be followed by no result, operative procedure should be advocated as strongly as one would in a hernia that has not responded to taxis.

When pain is not severe, obstruction not complete, and tenesmus with bloody mucus not marked, the case can be carefully watched, as these are the cases likely to become chronic and later be followed by a spontaneous cure by sloughing off of the tumor. Certainly, with the present state of aseptic operative procedures, this method of treatment can never more be considered seriously. We know that these cases can never be claimed as true cures, owing to the likelihood of stricture formation following the sloughing process, and that they are very prone to be followed by obstruction demanding at a later day an emergency operation which is likely to have a more serious aspect than would the question of primary operation for intussusception.

The author cannot agree with those who state that children bear operations poorly, and is quite satisfied that when the cases are seen early, say during the first thirty-six hours, the chances for recovery of the patient are extremely favorable. One of the writer's cases of recovery reported in this paper, a child under seventeen weeks of age, was operated upon during the first thirty-six hours. Another, a child of four months and twenty-two days old, was operated upon during the first twenty-four hours. The relationship of recoveries between strangulated hernia and intussusception with regard to previous duration is very similar. The longer the duration, the greater the mortality, due in each instance to

the same causes—shock, exhaustion, gangrene, and sepsis.

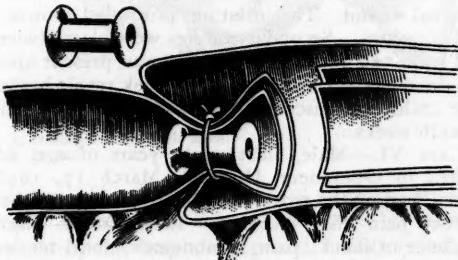
After exposing the tumor the following procedures are in order: reduction, artificial anus, entero-anastomosis, partial resection, typical (?) resection. Reduction is best accomplished by pressing through the intussusciens upon the apex of the mass in such a manner as to drive the intussusceptum through its receiving coat. Traction upon the extreme ends should not be practised, as it is liable to result in injury to the walls of the gut of such extent as to be followed either by immediate rupture or destruction of portions requiring a further and more protracted operation. Pressure from behind need never be severe enough to injure the integrity of the intestine in any way, as in all cases in which there are neither adhesions nor gangrene the reduction is extremely easy. In the irreducible variety, no matter what the condition of the gut, one of the more severe operations is indicated.

The establishment of an artificial anus requires no words from the writer, for all are thoroughly familiar with the steps of procedure and the indications warranting it. When the patient's condition will admit of further procedure than the formation of an artificial anus, partial resection or typical resection should be done. An entirely unnecessary operative procedure, and one productive of as much shock and requiring as much time as an operation of more radical results, is entero-anastomosis. Partial resection, i.e., resection of the intussusceptum through the receiving coat or the sheath, is advocated by Barker, Grieg Smith and others, and a modification of it is suggested by Paul and described in the London *Lancet*, 3, 30, 1895. The operation of Barker (Fig. 1.) consists in first placing a row of sutures at the entering end of the intussusception, so as to include the sheath or intussusciens and the intussusceptum, then making a longitudinal incision in the ensheathing portion, placing suitable ligatures about the mesentery of the sheathed portion, cutting off this sheathed portion, and removing it through the gut, or if long enough, through the anus. A few sutures are placed in the cut proximal ends, all hemorrhage is checked, then the longitudinal cut in the sheath is sutured and finally the abdominal wound is closed. This operation is indicated only when no preventive adhesions exist between the invaginated and ensheathing portions.

As a modification of this operation the writer would suggest that the row of sutures uniting the intussusceptum to the intussusciens be omitted, and that before cutting off the intussusceptum the healthy entering gut be brought through the longitudinal slit, first tying off the mesentery then cutting off the in-

tussusceptum and removing it and completing the operation after the manner of end-to-end anastomosis described by Maunsell. Paul's operation is a modification of that of Barker, and, we take it, was advocated with a view to shortening the duration of the operative interference, but has the objectionable feature of requiring the surgeon to add another instrument, a light metal tube with expanded ends, to his now overstocked store. It is also an operation that can be performed only in selected cases, *i.e.*, those in which the caliber of the gut is retained to a degree sufficiently large to admit such a tube or improved device. The operation is performed as follows (Fig. 2.): After a preliminary row of sutures connecting the intussusceptum and intussuscipiens, the gut is cut longitudinally as in the Barker operation; then the returning and entering layers are cut, and the tube is pushed into position. A stout ligature is then tied about the intussusceptum so as to include the tube; finally the intussusceptum is cut

FIG. 3.



Paul's operation.

Longitudinal section, showing the position of the metal tube.

off. The incision in the outer layer is then closed in the usual manner. The features commanding the operations of Barker and Paul are rapidity and diminished danger of soiling the peritoneal cavity. An objection is that the operation is more than likely to be followed by a diminution of the caliber of the gut.

In chronic intussusception, advancing in nature, the treatment resolves itself into an end-to-end anastomosis (after reduction as far as possible has been performed). Typical resection with end-to-end anastomosis should only be undertaken in those cases in which the patient's condition will warrant prolonged interference. The choice then lies in the hands of the operator between the use of Murphy's button, the Maunsell operation, and direct end-to-end anastomosis. Owing to the fact that more than one intussusception can take place, it is advisable to thoroughly examine the entire intestinal tract before closing the abdomen. Owing to the great variance in the mortality-rate as given by three most excellent observers during the past three years, Rydygier,

1895, seventy-five per cent.; Wiggin, 1896, twenty-two per cent., and Gibson, 1897, fifty-three per cent. the writer intentionally avoids presenting statistics which might further bewilder the reader.

CASE I.—Reported before the Section on Surgery, New York Academy of Medicine, March, 1895. *Medical Record*, p. 475, 1895.

Male, eight and a half months old, seen on the fourth day of the disease. Enemata had been unsuccessfully employed. No tumor was palpable either through the abdominal wall or per rectum. Celiotomy was performed and an intussusception of the enteric variety found in the left hypochondriac region. The mass was partially reducible; the remaining irreducible portion, almost six inches in length, was gangrenous. This gangrenous portion was removed and an end-to-end anastomosis with the Murphy button done. Septic peritonitis existed at the time of the operation. Death occurred within twelve hours.

CASE II.—Reported in the *New York Medical Journal*, April 16, 1898. F., male, aged nine years, was seized at four o'clock Friday afternoon in August, 1897, with colicky pain in the abdomen, limited to the right side and of rather severe character. During the night he vomited the contents of the stomach and some bile, and passed a large quantity of blood and clots by the bowel. There was marked tenesmus and frequent attempts to have a movement of the bowels throughout the following day, but with no further result than the passing of mucus and blood. His temperature was said to have been normal, while the pulse was slightly increased. On Sunday his condition showed all the evidences of severe shock, and upon palpating the abdomen a rather elongated tumor could be mapped out in the right side. In the absence from the city of Dr. Carl Beck the case was referred to me by the family physician. I saw the patient at nine o'clock on Sunday night and found the following condition: Countenance anxious, temperature  $101^{\circ}$  F., pulse 128, abdomen distended and tympanitic, painful to the touch, and a sausage-shaped tumor extending from the right iliac fossa to the costal cartilage of the tenth rib. I had the patient transferred to St. Mark's Hospital, opened the abdomen at ten o'clock, about fifty-eight hours after the onset of the symptoms, and found an intussusception of the enteric variety, the apex of which was within six inches of the ileocecal junction.

The mass was irreducible and gangrenous, and the mesentery was gangrenous to within an inch of its attachment to the lumbar column. In addition, the intestines were deeply engorged and a quantity of pus was found in the cavity. Resection of the mass and an end-to-end anastomosis with the Murphy button was performed, the abdomen thoroughly washed out with salt solution, and a gauze pack placed down to the anastomosis. The patient bore the operation very well and reacted nicely. During the two days following the operation he was given sixty cubic centimeters of Marmorek's serum with-

out any evidences of improvement. The condition of sepsis increased, and the patient expired at the end of the fourth day following the operation.

Upon examining the specimen a mass about two inches long was seen protruding at the distal extremity which was made out to be Meckel's diverticulum that had become inverted and evidently was the cause of the intussusception. Upon cutting the specimen open it was found to measure thirty-three inches in length. This extreme length was due to the tight manner in which the intussusceptum was packed in the ensheathing intussuscipiens (Fig. 4).

**CASE III.**—Female, aged four months, seen September 18, 1897. Condition extremely bad. Rapid, feeble pulse; cyanosis; apathetic. Temperature  $101^{\circ}$  F.; abdomen distended, quite tympanitic. No tumor upon palpation, due to abdominal distention. Previous history vague; had been ill for a week or

FIG. 4.



Specimen of Intussusception.

- 1. Intussuscipiens.
- 2. Ileum.
- 3. Meckel's diverticulum (inverted) and intussusceptum.

more. The family stated that seventeen physicians had seen the patient during her illness. A diagnosis of intussusception had been made by the majority and operation advocated by some but was refused. Finally the family begged that an operation be performed. This was done within an hour of admission and an ileocecal intussusception found, readily reducible, but a general septic peritonitis existed and death followed within twelve hours.

**CASE IV.**—Female, seventeen weeks old, well-nourished. Had had a previous day of diarrhea, and was seized with pain, restlessness, and bloody mucus dejections. Sent to the writer by Dr. Francis Huber, February 18, 1898. Enemas had been unsuccessfully tried. No mass or tumor palpable either by rectum or abdominal wall. Operation performed within the first eighteen hours; tumor found in right hypochondriac region and was of the ileocecal variety. Reduced readily. Patient stood the operation nicely but was taken ill with pneumonia; then another lobe became involved; finally recovery resulted. Suppuration occurred in the superficial layers of the wound. Discharged in five weeks.

**CASE V.**—Female, exactly five months old. Sent to the writer by Dr. Joseph Huber, February 23,

1898. Patient had suffered from tetany for some weeks. Bottle-fed and poorly nourished. History of previous diarrhea and of intussusception of a few hours' duration. When seen by the writer there was pain, restlessness, blood-tinged mucus stools, but no tumor upon abdominal palpation. By digital examination a protruding mass high in the bowel could just be felt. Several enemas were given, and upon digital examination the protrusion could not be felt. She was placed in bed and slept quietly for eight hours. Upon awakening she became restless, and had a blood-tinged mucus stool. Operation was performed. The tumor was found in the left hypochondriac region, extending down to the lumbar region. It was of the ileocecal variety. The tumor was fixed in this region and upon searching for the cause of its irreducibility it was found that a hernia of the small intestine had taken place through the foramen of Winslow. Several coils being reduced before the fixation of the intussusception could be relieved, the tumor was readily displaced and reduced by pressure through the intussuscipiens upon the apex of the intussusceptum. This child also recovered, but during three weeks following the operation there was absolutely no evidence of union in the abdominal wound. The intestines protruded upon several occasions. Secondary sutures were placed twice, and upon two occasions blue pus was present upon the dressings. During the third week repair began. The child was discharged between the sixth and seventh weeks.

**CASE VI.**—Male, thirty-eight years of age, admitted to Gouverneur Hospital, March 17, 1898. When seen by the writer he stated that he had had colicky pain that morning. Examination: Slight evidence of shock; pain in abdomen; local tenderness in left hypogastric and lumbar regions; vomiting; had a rather large bloody mucus stool. Palpation: Very sensitive upon left side; a tumor elongated in shape could be felt in the left lumbar region. Three pints of saline solution were given after a three-pint simple enema; both were negative in results. Bloody stools continued at intervals. Operation not indicated by patient's general condition. March 18th. Three-pint injection of salt water followed by bloody mucus only. Pain eased some. March 19th. Enema of three pints of soap and water. Pulse  $100.2^{\circ}$  F. Tumor disappeared. Calomel, 10 grains, and eleterin,  $\frac{1}{6}$  of a grain, were given. March 20th. Large movement. March 21st. Patient discharged.

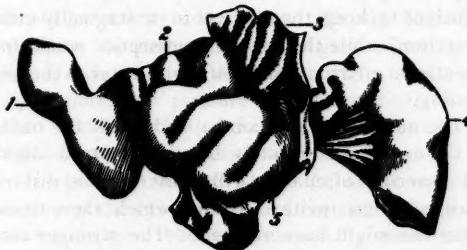
**CASE VII.**—This case occurred in the practice of Dr. M. Dantes during March, 1898, who cited the history to me with a view to treatment. Female, aged three and one-half months, ill two days when seen by Dr. Dantes. She had had diarrhea and vomited a few times during these days. When seen there were bloody-mucus stools, pain, and restlessness. No tumor found by abdominal palpation, but evidences by rectal examination. Enema proved of no avail. Operative interference refused; child died on the twelfth day of the disease with all the evidences of a septic peritonitis. During the latter

days of her life foul-smelling discharges were evacuated but no sloughs.

#### VOLVULUS.

Volvulus is a disease of advanced life and consists usually of an axial rotation of a portion of the bowel with occlusion sufficient to cause either partial or complete obstruction. The twisting may be and frequently is followed by gangrene of the engaged loops or portion of the bowel. The causes are chiefly anatomical as predisposing with exaggerated peristalsis as an excitor. The anatomical cause is either a preternaturally long mesentery or a normal mesentery elongated, possibly by a weight in the bowel or

FIG. 5.



1. Meckel's diverticulum.
2. Intussusceptum.
3. Intussuscipiens split open.
4. Ileum.

hernia. About fifty per cent. of all cases have been found involving the sigmoid, and here the cause is eminently the long mesosigmoid, usually found giving great mobility to this portion of the intestines. The next frequent site of volvulus is the lower ileum or cecal region. Men are said to suffer from volvulus four times more frequently than women.

The symptoms of an attack of volvulus are sudden onset of pain more or less general in the abdomen and finally localized; occasionally a tumor corresponding in outline to the intestine, this tumor varying on percussion from a dull to a highly tympanic note; pulse accelerated; obstruction following after the bowel is emptied below the point of twisting. These symptoms may suddenly disappear as a result of self cure by untwisting or as a result of an injection. In case this does not occur a progressive peritonitis, first localized then generalized, with concurrent gangrene, takes place.

The treatment resolves itself into the use of enemas and operative interference. If an enema has been used successfully there is usually an evidence of gas or feces coming from the anus or retention of the fluid for a length of time, while the abdominal symptoms are immediately ameliorated.

It has recently been stated that numbers of cases of volvulus of a minor degree untwist either dur-

ing palpation of the abdominal wall or as a result of peristalsis due to some cathartic agency. Should injections *plus* massage fail, then celiotomy should be performed with a view to releasing the twist, and carrying out any of the following operative procedures found necessary. These are, in cases not requiring excision of gangrenous gut, the stitching of the mesentery so as to shorten it or to prevent the twisting recurring, or the removal by excision of a portion of the long and lax sigmoid with its mesosigmoid, and then performing end-to-end anastomosis. Where gangrene has taken place the course of procedure is exactly as in the case of gangrene in strangulated hernia or intussusception. During three years of an emergency service only three cases have occurred in Gouverneur Hospital. One of these came to the writer in 1896. The patient, a female about thirty-eight years of age, was moribund at the time seen, with a history of a week's illness, onset with sharp abdominal pain, complete obstruction after a small movement; then localized pain in the left lower region of the abdomen. Distention was marked when seen by the writer; pulse 140; temperature subnormal. The patient was cyanotic. No operation; death in a few hours. Autopsy: A volvulus was found involving the sigmoid and rectum with gangrene of fourteen inches of gut.

The second case occurred in the service of the late Dr. O. J. Ward in August, 1897. A male, aged 37 years, with a history of epigastric pain of slight character for some time. Five days prior to admission had an attack of diarrhea followed by complete obstruction. Upon admission severe pain was localized in the epigastrium, general abdominal tenderness, dulness over lower abdomen; tympanites over the right hypochondrium; pulse 120; respiration rapid; first evidence of vomiting since illness began. Abdominal section was performed. General fibrinous peritonitis with a volvulus of a part (?) of the small intestine was found. This was readily reduced after breaking up some adhesions. Patient died in thirty hours.

The third case occurred in the early summer of this year in the service of Dr. John Rogers and was seen by the author. The patient was an elderly Polish Jew with a large irreducible hernia. When seen by the writer he was suffering from symptoms of a strangulated hernia, but upon operation by Dr. Rogers, a volvulus of the ileum was found with other contents of the sac. The patient died within forty-eight hours from shock (?).

Although this third case was not a typical case of volvulus, nevertheless, the twisting evidently was the cause of the irreducibility, the patient having suffered from a reducible hernia for years.

**THE PRESENT STATUS OF ANTISEPTICS  
USED IN SURGERY OF THE EYE.**

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THE constantly exposed position of the conjunctival sac, together with a favorable temperature, sufficient moisture, and proteid matter enough to encourage bacterial growth, make this organ the almost constant habitat of micro-organisms. Here they find many safe retreats in glandular openings and other recesses, and under certain conditions give rise to purulent processes. Under ordinary circumstances Nature has, however, happily provided counteracting influences which prevent bacterial development to any dangerous degree. The abundant blood supply of the eyelids and extra-orbital structures assures a local vitality great enough to make at least improbable any serious invasion of pathogenic organisms into these tissues. On the other hand, the wonderful and perfect drainage of a healthy conjunctival sac, together with its flushing apparatus, the lacrimal gland, are ample to dispose of unusual numbers of bacteria in time of health. It is, however, not always so when through some cause or other these natural safeguards become in a measure debilitated.

In a large percentage of those cases in which surgical interference is indicated, a concomitant defect in the power of the eye to protect itself is also present, hence, infections due to lack of special precautions have often taken place. It is evident to all observers that, since the general recognition of the principle of antiseptic precautions in operations on the eye, failure of good result through infection has been rare indeed. It is but recently, however, that it has been observed that germicidal agents, which are used with so much confidence, do not deserve the foremost commendation for reliability in procuring brilliant results in eye surgery, and that, in fact, they often carry within themselves elements of the greatest danger to an eye that has been operated upon, especially if the deeper and more delicately nourished structures are involved. Chief among these dangers may be mentioned the incidental irritation these agents produce if used in the strength which experience teaches is necessary to accomplish destruction of pathogenic germs. To destroy the enemy of good healing in its hidden recesses by chemical agencies has been proved to be practically impossible without serious damage to the tissues and consequent lowering of their vitality. Within the last few years many tests have been made to determine the relative value of chemical antiseptics used in the eye. In all these tests it has been

clearly shown that none of the antiseptics, though used in strong solution, would of themselves render the conjunctival sac aseptic, and that the incidental mechanical cleansing is a factor far more efficient than the antiseptic itself. In fact, irrigation and cleansing with normal saline solution has proved just as efficient to reduce the number of micro-organisms and render the eye surgically clean as when antiseptics of a chemical nature were used. The point of the greatest importance has been found to be the repeated cleansing by swabbing and irrigation combined, the quality of the solution, whether a chemical antiseptic or distilled water, being of no consequence. Once thoroughly sterilized by a process of frequent swabbing and irrigation, mild antiseptics, such as boracic-acid solution, etc., were sufficient to keep the surface in a surgically clean condition, while the stronger antiseptics would frequently set up irritation, itself detrimental to the best healing.

The nutrition of the cornea and of all the media of the eye is so delicately balanced that the slightest lowering of vitality will cause serious disturbances and thus invite infection, which these tissues otherwise might have resisted. The stronger antiseptics, consequently, are used less and less, and Nature's method of mechanical cleansing with the use of normal saline solution, or some other non-irritating solution, finds acceptance. In operations on the lids and appendages, where nutrition is always good, the character of solution is not so material, and no harm could result from using even the stronger antiseptics. Here, however, though harmless, the stronger antiseptics are not necessary, as the excellent blood supply in these structures is fully sufficient to guard against infection provided ordinary cleanliness is practised. It has been the practice of a number of prominent eye surgeons to wash out the anterior chamber after cataract extraction with a solution of boracic acid or some other mildly antiseptic solution. But even these have been found in many cases to favor inflammatory processes and have been largely abandoned for this special use. My experience has been that the quickest and most favorable healing with the least amount of irritation has been in those cases in which the stronger antiseptics, such as 1-2000 or 1-5000 sublimate, were avoided, and in which normal saline or boracic-acid solutions only were used to insure surgical cleanliness by repeated irrigation and swabbing after the more serious diseases of the lids and lacrimal apparatus had been cured by appropriate treatment. These cleansing processes have been generally begun a few days previous to operating on intra-ocular structures. On the other hand, I have

on different occasions found that a solution of 1-5000 sublimate not only irritated some eyes considerably but actually seemed to endanger good healing through such irritation. In this experience I am corroborated by many leading eye surgeons.

A source of great danger in operations on the eye is the improper or insufficient preparation of the instruments and general surroundings. To act strictly in conformity with the best teachings, based upon bacteriologic facts, one must have due regard for the influence of air currents and for commotion in the operating-room in stirring up dust. No amount of attention and care can always prevent infection when these precautions are not taken during an operation. In the preparation of the operator, as well as the instruments, the ordinary rules of aseptic surgery should be strictly adhered to. Shortly before the operation instruments can with great advantage be dipped into absolute alcohol and then thoroughly wiped under firm pressure with clean cotton wool, when after being boiled they are placed in a concentrated boracic-acid solution for immediate use.

The present tendency of the use of antiseptics in surgery of the eye is to discard the stronger and depend more upon obtaining asepsis by means of the weakest solutions together with mechanical cleansing. Experience and careful observation have proved this to be the safest and surest means of obtaining ideal results.

## CLINICAL MEMORANDUM.

### THE DIFFICULTIES OF DIAGNOSIS IN RUPTURE OF THE SPLEEN, AS ILLUSTRATED BY A CASE.<sup>1</sup>

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ON February 3, 1894, I was summoned to Staten Island to see a boy who had been injured while coasting on a hand-sled, having been thrown violently against a tree. The tree was a sapling and in striking it he was doubled up around it, the point of impact being the left lumbar region. The boy was picked up in a state of profound shock and carried into the house. He was at once placed in bed and hot bottles applied. The local physician who was promptly called gave the boy stimulants and a hypodermic injection of morphin to control the shock and relieve the pain in the left lumbar region of which the patient complained. He rallied at the end of four or five hours. At this time he was unable to pass his urine and a catheter was used to empty the bladder. About ten ounces of urine was obtained and floating in it were a great number of minute blood-clots which upon settling

completely covered the bottom of the ordinary chamber vessel.

The accident happened at about five o'clock in the afternoon and I saw the patient at 2.30 P. M. the following day. At that time I learned the above history and saw the three separate specimens of urine which had been secured and saved for my inspection. Minute blood-clots were apparently still in the amount described above. I recognized the boy at once, a tall, slender, swarthy complexioned young fellow, a Mexican, the son of a prominent citizen of Vera Cruz. He had presented himself at my office with letters of introduction upon his arrival at New York with his brother six months previously, for the purpose of attending a private school on Staten Island.

I found him lying on his back, comfortable in every way except for a slight headache. His pupils were contracted; skin normal; he was under the influence of small doses of morphin; temperature 101.5° F. There was no paralysis, no points of tenderness along the spine, no irritability of the stomach; pressure in the left lumbar region was painful. Dr. Walzer, who was in attendance and who continued throughout to share with me the responsibility of the case, had already made a diagnosis of probable trauma of the left kidney and with this I cordially agreed. The extent of the injury was apparently not sufficient to demand surgical interference. The expectant plan of treatment was adopted, complete rest, sufficient morphin to control pain, light diet and careful general nursing. He continued to pass minute blood-clots in the urine in steadily decreasing amounts for four days, when they disappeared, and complained of pain in the region of the left kidney for ten days, his temperature ranging daily between 101° and 102° F. All his symptoms gradually disappeared and at the end of three weeks he was allowed to sit up and three weeks later was permitted to go out walking for exercise. While walking with his brother he foolishly got onto the tailboard of a passing wagon, but at the imperative demand of the driver promptly jumped off. He was immediately taken with terrific pain in the left loin and epigastrum, attended with violent cramps and vomiting. He walked home with assistance but immediately went into a state of collapse, necessitating treatment similar to that employed at the time of the original accident. I had been seeing him at regular intervals and was now hastily summoned again. The symptoms of acute gastritis yielded promptly to morphin treatment but the temperature went steadily up during the following forty-eight hours till it reached 104° F., accompanied by all the signs and symptoms of a general peritonitis focused about the vermiform appendix. Upon consultation an exploratory laparotomy was decided upon with the idea of removing the appendix if conditions demanded it, and at the same time taking advantage of the opportunity thereby afforded of passing the hand into the abdominal cavity and exploring all the abdominal organs and their immediate surroundings. The left kidney still protruded itself in thought as the original seat of the difficulty, with the possibility of a perinephritic abscess. Accordingly an abdominal incision was made in the median line. A recent plastic exudation was present throughout the entire ex-

<sup>1</sup> Read at a stated meeting of the Northwestern Medical and Surgical Society of New York, December 21, 1898.

tent of the peritoneum, the appendix was elongated, swollen and congested and adherent to the omentum. It was removed. I then passed my hand, and arm as far as the elbow, through the incision and examined all the organs of the abdomen; the liver, the spleen, the kidneys, and the pancreas were all in turn grasped and carefully palpated. The size, the position, and the consistency of each appeared normal and no sign of an abscess was anywhere present.

The patient rallied favorably from this operative procedure, the peritonitis entirely disappeared and he convalesced for a week with all the evidences of having been relieved of the *fons et origo* of his trouble. At the end of that time his temperature began to rise daily, the stomach became irritable and, after repeated daily examinations, a point of fluctuation with slight bulging was discovered at the middle of the anterior border of the right lumbar muscle. This was freely incised and about four ounces of pus was evacuated. The cavity was explored with finger and probe but no lead in any direction could be found. The patient recovered from this procedure and improved steadily for nine days, when he was taken with a severe chill, rise of temperature to 104° F., and a drenching sweat.

One of the most prominent surgeons in New York was now called in consultation, and in his presence the patient was again etherized and the pus-cavity explored. By enlarging the wound and thus securing more room a lead was found and a long uterine sound could be made to pass its entire length following the concavity of the abdominal wall on its interior surface to a point directly over the pit of the stomach. At this point an incision was made on the tip of the sound and the latter pushed through. Withdrawing the sound and entering the pus-tract through the new incision the sound followed the curve of the diaphragm on its under surface obliquely to the left its full length. Through the new incision the pus-tract was flushed out with sterilized water but not much pus was found. It was not thought wise to do anything more. A drainage-tube was inserted, through which the cavity was washed daily. This evidently afforded freer discharge and gave relief. The temperature was reduced to normal and remained near that point for a week with satisfactory improvement in his general condition. Again the chills recurred with marked rise of temperature and exhausting sweats. The same consultant was asked to see the patient again. After carefully summing up all the facts in the case and sifting the evidence, the conclusion was reached that the left kidney or its immediate surroundings must be the source of the pus and an exploratory incision at the seat of that organ was decided upon. In deference to the wishes of friends the consultant was asked to do the operation and consented. The kidney was found normal in size, appearance, and consistency, and no evidence of the presence of pus in the neighborhood could be discovered. As no other surgical procedure suggested itself which offered as much prospect of relief as the one just completed, the kidney was restored to its normal position and the wound closed. No appreciable depression followed this operation; on the

contrary the patient seemed possessed of renewed strength and all the symptoms improved. At the end of another week, however, the discharge from the sinus gradually diminished, the stomach became irritable and the exhausting chills, temperature and sweats again renewed their deadly work. An area of dulness developed at the base of the right lung and the liver seemed slightly depressed. The patient was now well-nigh exhausted but still full of courage and anxious to submit to whatever offered any relief. At this junction Dr. John A. Wyeth and Dr. Frederick Lange were called in consultation together.

They discovered the same area of dulness and agreed upon the existence of a subphrenic abscess. They were also agreed that some injury to the liver was probably the original and essential cause of all the trouble. Dr. Wyeth favored immediate evacuation of the pus. Dr. Lange thought it would be useless; he was willing, however, to favor it to the extent of being present. I therefore asked Dr. Wyeth to operate and Dr. Lange kindly assisted.

The best route by which to reach the pus seemed to be directly through the pleural cavity. Accordingly, three inches of rib was resected, and while pressure was made to prevent the ingress of air the pleural cavity was entered. The edges of the incision in the thoracic pleura were then stitched in an ellipse to the diaphragmatic pleura and within this ellipse a trocar was passed through the diaphragm into the pus-cavity. About half a pint of pus escaped. Drainage-tubes were inserted, dressings and bandages applied and the patient put to bed. His condition improved a little after this procedure but it was apparent that his end was near. He had a severe fit of coughing the fourth night after the operation, during which his heart gave out and he expired. Necropsy revealed a normal condition of both kidneys and the liver but disclosed a ruptured and necrosed spleen. The anterior aspect of the spleen, however, was intact and surrounded by coils of intestines adherent to give no suggestion to the eye or touch that it was injured. On breaking through the adhesions, however, there was disclosed a large pus-cavity and necrosis of the spleen to such an extent as to leave intact only the blood-vessels and the anterior shell of the organ.

The case is instructive in emphasizing the importance in all cases of internal injury, and especially when the diagnosis is uncertain, of prolonged rest, even to the extent of months. The boy in question had evidently recovered completely from the original injury, i.e., the wound of the kidney and the spleen had both undoubtedly healed by primary intention. The violence done to the delicate tissue involved in the healing process, however, when the patient jumped from the cart, probably tore open the primary lacerations of the spleen, and suppuration occurred.

The behavior of the pus in that location is interesting. First there was awakened a general peritonitis, which was self-limited in spite of the continued presence of the pus. Then the pus took such a remarkable course in following the curve of the diaphragm from behind obliquely forward and to the right across the anterior face of the stomach

and accumulated at the border of the right lumbar muscle. As the tissues became weakened by continuation of the process and less resistant, the pus found a new channel and accumulated above the liver. In the light of the necropsy the only mistake made, if mistake it could be called, was in not pushing the exploration a little further at the time the left kidney was exposed. It is possible that direct communication with the necrosing tissue might have been established and the suppurating process stopped.

The operation for reaching the subphrenic abscess was one of the nicest bits of surgical work it has ever been my good fortune to participate in. The pity of it is that it could not have been productive of fruitful results.

## MEDICAL PROGRESS.

*A New Bread for Diabetics.*—DAVIS (*Jour. Am. Med. Ass'n.*, November 5, 1898) recommends for the use of diabetic patients a flour made from one of the many edible pine nuts. It is fine, slightly yellow, and bland in taste. It contains no starch, and only seven per cent. of cane sugar, almost all of which is lost in the baking if the bread is raised with yeast. Bread and cake made from it is found to be an agreeable substitute for wheat bread. It must be used in moderation, however, or it will cause indigestion with loss of appetite and disinclination to eat this bread. The flour from which it is prepared is known as Chicago Sanitary Flour. It contains 55.65 per cent. of albumenoids, 6.42 per cent. of mineral matter, and 19.82 per cent. of oil. Sweet almonds contain 53 per cent. of oil, and cocoanut 70 per cent. This pine flour is, therefore, much less likely to cause indigestion than either of these nuts. These oils are not in themselves objectionable. On the contrary, they help to retard nitrogenous waste, and are therefore of service, if they do not derange the stomach. The best results are obtained if the patients are gradually accustomed to the change from wheat to diabetic flour.

*Danger of Punching Out Bits of Malignant Tumors.*—RICHARDSON (*Boston Med. and Surg. Jour.*, October 27, 1898) cites two cases from his personal experience to show the disadvantages of resting the diagnosis of carcinoma on the bits of tissue secured by a punch. In one of these the punch failed to bring out malignant tissue, and the patient went on in a false security until the disease had grown to such an extent as to render successful operation impossible. The bit of the breast of the other patient was proved by the punch to be not carcinomatous; but the clinical appearances were so contrary to this conclusion, that another punch-thrust was requested but refused by the patient. Two weeks later, the breast and axillary contents were removed, and it was noticed that there was infection of the pectoralis major, the pectoralis minor, and the axilla, in a straight line. This was, without doubt, a direct contamination of previously healthy parts by the exploring punch, for the nodules were of about the same size and age, and in

the muscles, at least, they were the only ones found. Richardson says that the time has come when all suspicious breast-tumors should be explored so thoroughly that inspection and touch are possible. Even then a nodule may be overlooked. Exploration with a needle or a punch not only exposes the loose spaces about the tumor to infection, but it gives, by failing to extract a specimen from the affected spot, a false and highly dangerous sense of security.

*The Prevention of Conception.*—TREUB (*Centraalbl. f. Gynak.*, October 15, 1898) says that the principle, "No medical treatment without medical indication," does not meet all cases. Cosmetic operations are certainly justifiable. Not less so is the proper application of the pessarium occlusivum. This means of preventing conception is absolutely without danger. The danger for nervous persons lies rather in interrupted coitus and in the use of condoms. It is the duty of the physician to warn phthisical, epileptic, and neurotic persons that they ought not to have children. If a physician refuses, on account of Biblical or Talmudic law, to furnish to such persons the necessary knowledge to prevent conception, there is an end of medical scientific treatment. The significance of normal cohabitation is in general far too little considered. In men as well as animals the longing for coitus is not always associated with the desire for offspring, so that it is not right to speak of sterile intercourse as something contrary to Nature. Complete sexual abstinence is capable of working injury, if the attempts to overcome the desire for it put the physical and psychical powers of the individual to too great a strain. Voluntary sterility is allowable when the increase in the number of children would make it impossible that all should be properly brought up, or when the wife is not in physical condition to bear children. Preventive measures are abused by the rich, but they are too little used by the poor.

*The Difficulties of Defecation in Infants.*—MARTIN (*Jour. Amer. Med. Ass'n*, November 5th) says that the imperfect development of the lower part of the intestine of infants causes them to strain at stool. The infant's rectum and sigmoid flexure are deficient in muscular elements, and hence the power of peristalsis cannot be present to the degree necessary for adult defecation. Furthermore, the relation of the peritoneum to the rectum of the infant also contributes to the difficulties of defecation, as does the relatively great length of the descending colon and sigmoid flexure. The third feature which tends to obstruct defecation is the rectal valve. The presence of such a valve has been denied, but Martin found it in each of more than three hundred subjects examined by him. In most cases there were three valves, although in some cases there were four and in others only two. The valves are particularly well developed at birth, when they span one-half of the diameter of the gut. The bony pelvic outlet in the newborn infant measures, in its transverse diameter, 1.27 cm. (slightly more than half an inch). The pubococcygeal measurement is even less, while the average distensibility

of the sigmoid flexure is four or five times these measurements. All these facts explain how difficult it is for an infant to expel any other than fluid or semifluid feces. The practical lesson is that by means of diet, hygroscopic suppositories, and fluid injections the fecal matter should be kept from passing in a solid state.

**Traumatism and Appendicitis.**—SMALL (*Med. Record*, September 10, 1898) says that traumatism plays an important part in the development of appendicitis. The original idea that foreign bodies, such as grape-seeds or fecal concretions, set up attacks of appendicitis, has been generally given up. Later, the theory was advanced, and is still widely held, that catarrhal conditions in the cecum are the real cause of the inflammation in the appendix, and the recent epidemics of influenza with accompanying enteritis, are made to explain the great increase in late years in appendical trouble. Still, this does not explain why so large a percentage of cases is found in young adult males. The reason for this, according to Small, is their more frequent exposure to accidental injuries and strains, and the strong contractions of the abdominal muscles occurring in their work. The increase of abdominal pressure thus caused forces a part of the contents of the cecum into the appendix. In support of this theory the writer cites thirteen cases occurring either in his own practice or in that of his friends in which the traumatic history seemed clear. He thus sums up our present knowledge upon the subject:

1. That general prevalence of catarrhal conditions of the bowels, perhaps as an accompaniment or result of the gripe, is responsible for a large part of the general increase in prevalence of appendicitis.
2. That accidental injuries, strains, and work demanding strong contraction of the abdominal muscles may be held accountable for the greater prevalence of the disease in males.
3. That such injuries and strains act by forcing material, loaded with the bacteria which produce appendicitis, from the cecum into the vermiform appendix.
4. That in consequence of the irritation of such material, or from some other cause, these germs here find a favorable soil for their multiplication and development.
5. That in common with other germ diseases a time of incubation must elapse (for the multiplication of these germs) before symptoms sufficiently marked to prove characteristic of appendicitis can appear.
6. That the disease is of growing medico-legal importance, as many cases are of traumatic origin, and may, therefore, give rise to proper suits for damage or valid claims against accident-insurance companies.

**Anesthesia of Anemia.**—KOFMANN (*Centralbl. für Chir.*, October 8, 1898) says that he has found that the finger, or hand, or any part of the body that is absolutely free from blood becomes anesthetic. Therefore, instead of injecting cocaine or using chloroform for operations upon the extremities, he simply applies a tight elastic bandage so as to render the part absolutely free from blood. After the anemia has continued for fifteen or twenty minutes, or, in some instances, for half an

hour, he can operate freely without the patient experiencing the least sensation. He has proved the accuracy of this method in a number of instances, and is much pleased with it, inasmuch as he avoids the unpleasant after effects of cocaine, and finds it necessary to use this remedy only in operations upon the trunk or head. In operations upon these parts he uses Schleich's method of cocaine anesthesia. Chloroform he has given up almost altogether. It finds its place merely in particular instances.

## THERAPEUTIC NOTES.

**Menthol in the Treatment of Migraine.**—FRIESER (*Münchener med. Wochens.*, August 30, 1898) looks upon menthol as a most valuable remedy in the treatment of migraine. When an attack comes on he either washes out the stomach with lukewarm water containing a little menthol, or if this is not practicable he directs the patient to drink a quantity of hot water and administers valerianate of menthol. The following is a favorite prescription:

B	Menthol	valerian.	.	.	.	.	.	3 j
Aq.	dest.	.	.	.	.	.	3 v	
Syr.	capillor.	vener.	.	.	.	.	3 vj.	

M. Sig. Fifteen drops every two hours.

It is important to improve the diet of anemic individuals by giving them iron and artificial foods. These he usually prescribes in the form of ferratin and somatose. The diet of constipated patients must be especially looked into. Daily irrigation of the bowels with lukewarm water containing a little glycerin, lukewarm sitz baths, abdominal massage, and electricity will be found of service in combating constipation. Fluid extract of cascara is a valuable internal remedy. The writer has little faith in the treatment of headache by antipyrin, antifebrin, phenacetin, salophen, salol, or lactophenin. If the pupils are greatly contracted a powder made in accordance with the following prescription may be given every two hours:

B	Caffein.	citrat.	{	aa	.	.	.	gr. viiss
Menthol	.	.		Quinia sulph.	.	.	.	gr. xv.

Div. in chart. No. X. Sig. One powder every two hours.

Patients with widely dilated pupils may inhale ether from a handkerchief, two or three drops at a time. Valerianate of menthol should also be given in the interval between the attacks of migraine. A permanent cure can be effected in many patients.

**Menthol-Iodol for Use in the Nose and Throat.**—To overcome the unpleasant odor of iodol, which has been found so valuable in the treatment of catarrhal and ulcerative processes of the nose and throat, it is recommended to incorporate with it one per cent. of menthol which serves also to produce a refreshing sensation in the parts treated.

### For Vomiting in Pertussis.—

B	Menthol	:	:	:	:	:	gr. i
Sacchari albi	.	.	.	.	.	.	gr. xii.

M. Div. in chart. No. VI. Sig. One powder every two hours.—*Baginsky*.

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SATURDAY, DECEMBER 24, 1898.

### LAWYERS' FEES—DOCTORS' FEES

NEW YORK CITY or at least the non-legal portion of its inhabitants, for perhaps the legal fraternity considered it too mere a bagatelle to deserve even passing notice, have been not a little interested in the fact that has come to public attention during the past week that a lawyer may receive a \$5000 fee and forget all about it. No one we are sure has the slightest doubt that the distinguished lawyer who denied absolutely having received the aforesaid fee, though it was afterward clearly proven that he had received it, was eminently sincere in his denial. It would simply seem that \$5000 fees are such common occurrences in a great lawyer's everyday life that he cannot reasonably be expected to recall their receipt with absolute assurance if any considerable time has elapsed since the event, or if he happens to have been at the moment of its presentation so busy with other or more important matters as not to have made an act of reflex consciousness and so impressed the trifles on his memory.

We do not know of many members of the medical profession who would be liable to be bothered by such an annoying slip of the memory. It may be, however, that our acquaintance with the upper-ten-

dom of the medical fraternity is not extensive enough to warrant our making an absolute statement in the matter. For after all the two professions, law and medicine, are filled by men who come from the same classes of society, whose educations take about the same length of time and cost about the same amount of money. There is no special vocation of genius to the one nor relegation of intellectual featherweights to the other. The labor required to fulfil the duties demanded of the lawyer is at least no more exacting than that demanded of the physician. We do not think that it has ever been hinted that the work done by the medical profession was of less importance to humanity than that done by their brothers of the law, and they are quite as frequently successful in their efforts in behalf of those who consult them. It would be manifestly unfair then to think that the rewards gained by the lawyers were so much greater than those accorded to the doctors. All of which goes to prove, we think, that despite the fact that we may not know them there are a number of medical men in Manhattan, who may in moments of inattention pocket \$5000 fees without reflecting thereon, and so may hap demand them again. *O, fortunati minium!*

But why is it then that when the question of doctors' fees gets into court lawyers always insist on their excessiveness? One might think that the generous fees they collect themselves would make them realize that the value of the work of a liberal profession cannot be estimated by any cut and dried rules of trade, or commercial deductions as to the value of time. The value of a service in law depends upon the worth of it to the party for whom it is performed, and the following out of exactly the same steps of legal procedure has a very variable fee for its reward according to the circumstances of the client for whom it is done. Why the same rule should not hold for the services of a physician does not seem very clear. But the attempt to put such a principle into action by the doctor brings down upon him in case of legal complications the malediction of judge and lawyer, and almost inevitably leads to the extremely unpleasant predicament of having to accept a fee made more or less arbitrarily smaller by the court. We humbly submit that all this seems scarcely in accordance with the American spirit of fairness or with the high principles of equity our

legal brethren laud so justly. Let us hope that this little public reminder that "there are others" will give them a fellow feeling that will make them wondrous kind to the little seeming exaggerations that their brothers of the healing art may commit in the making out of bills.

#### *HYPNOTICAL SCOTOMATA.*

UNDER the caption "Forgot Her Own Name" the New York daily papers at the beginning of the week were discussing the case of a woman who called up police headquarters by telephone to ask if search was being made for a missing person of her description who had completely forgotten her own name. The police took her to a hospital and her friends were found. The case proved to be one of hysteria and the symptom that attracted so much attention, the amnesia of her own name, while not of frequent occurrence, is not unique in medical literature. It is analogous to other functional disturbances that cause scotomata, dark or blank spots, in sentient or psychical processes. Genuine scotomata of vision occur frequently; scotomata, so to speak, of taste or smell, in which the faculty to perceive certain savors or odors is lost, have been noted and the irregular anesthesia that constitutes one of the stigmata of hysteria is nothing more than these blank spots in tactile perception. The psychical scotomata are perhaps rarer and they occur especially in the voluntary sphere, though it is unfortunately the custom to ascribe manifestations they produce in this field to a blameable lack of will power. Some of the very peculiar judgments of the hysterical are undoubtedly due to hiatuses in the logical reasoning power that can be best explained on the ground that certain parts of the nervous organism necessary for perfect ratiocination are not at the moment capable of functioning—cerebration scotomata.

#### *"GRIP" OR "COLD."*

MANY doctors in New York City have been seeing during the past few weeks a series of cases that have easiest ranged themselves under the diagnosis grip. The symptoms have been irregular and atypical and have differed in different cases. Often there has been no coryza or any other involvement of mucous membrane until after two or three days of illness. Sometimes there has been very little fever, though

complaints of pains in the bones and other symptoms of general malaise have been frequent. Sometimes fever has been a marked symptom though there has not been much general disturbance; at times the pulse has represented the most disturbed function in the case.

Since the epidemic of influenza ten years ago there has been a tendency to attribute all irregular or atypical forms of what used to be called an ordinary cold to grip. There is danger that a word like this may, by seemingly satisfying the natural inclination to look for the cause of a thing, discourage investigation of real causes. It would not be the first time by any means that a word has been made to do duty as a mantle, voluminous as charity in the moral order, to cover a multitudinous pile of ignorance. But it seems scarcely worthy of our vaunted end-of-the-century science to bridge over a hiatus in our knowledge by a structure that is words, words and very little if anything more.

The cases sketched just above are by no means typically grippal; in fact, unless Pfeiffer's influenza bacillus could be demonstrated in them we see no good reason at all why they should be classified as grip. We would much prefer to hear them classed simply as "colds." Not that "colds" is not so indefinite and general a term as to be almost meaningless and to be eminently unsatisfactory as far as the science of etiology goes, but its use is a confession that we do not know the cause and further investigation is encouraged. The fact that these cases have all occurred within a few days does not take them out of the catalogue of colds, which in the winter time are prone under certain meteorological conditions to occur in numbers. The further fact that the cases have at times occurred in groups so as to appear to have a certain epidemicity or even contagiousness does not argue against their being "colds." For we suppose if a cold means anything it means a microbic invasion due to certain weather influences, to increase in number and virulence of certain bacteria and to the lowered resistive vitality of the patient. Let us have the attempt to differentiate some of these colds from one another, first clinically by noting the grouping of certain symptoms, and second etiologically by finding the bacteria or some of them at work under the varying circumstances.

**THE EVOLUTION OF FOOTBALL.**

It is interesting to note now that the football season is practically over, and the New York Harvard Alumni have properly honored the victors of the year, that there has been an almost total absence of that somewhat blatant disapproval of the game, so usual a few years ago, by a press that published accounts of brutal prize-fights without a comment. The fact of the matter is, the evolution of football has made for gentler methods in its practice. As it has been played this year it is a striking example of what true American manliness has been able to make out of a sport that seemed essentially rough. Much remains yet to be done to mollify certain objectionable features of this character but the healthful development of the game may confidently be left to "the powers that be" under whose guardianship the difficulties to be met are thoroughly appreciated. Their gradual removal is persistently and successfully being accomplished.

The football field has proven the nursery from which, as recent history shows, many a self-forgetting hero has come. We are glad to chronicle the gradual disappearance of certain objectionable features of the game and to encourage its further evolution along lines that, while leaving it an arena for gentlemanly sport of the highest order in which the best qualities of rising young manhood are brought out (a thorough eraser of the effeminate ways that modern luxurious city life threatens to bring into vogue), will make it still worthier of the attention of the cultured classes whom it now so powerfully attracts.

**SEWAGE AND OYSTERS.**

We print this week a résumé of the practical conclusions of the Committee of the British Association for the Advancement of Science, appointed especially to report on the effect of sewage on oysters. Now that the holiday season is here, when so many of the popular bivalves are consumed, it seems particularly timely. The report points out very clearly that oysters are extremely liable to be contaminated by sewage material present in the water in which they live. As during the last few years the neighborhoods of our great oyster bays have become more and more thickly populated, with a consequent discharge of sewage into the bays, it is clear that the danger from oysters is becoming every

year greater. The near future will see the danger increase, not diminish, unless measures are soon taken to protect the oyster beds and properly dispose of sewage.

Oysters and milk constitute two articles of diet that are still very plentifully and very generally consumed in the raw state in this country. (Milk, at least, is not used to any great extent raw except here and in England.) Of late years public opinion and State and municipal regulation have done a great deal to secure for us pure milk, but it was only after the sacrifice of thousands of children's lives that this was accomplished, and even the present condition of affairs with regard to the milk-supply of many of our cities cannot be a special subject of congratulation. It is not probable that any such serious lesson will ever come from the use of oysters, for they are consumed by the more resistive adult. In more than one instance, however, precious lives have been sacrificed to typhoid because of the neglect of the plainest precautions in the matter of the sewage contamination of oyster-beds.

This matter evidently demands the most careful consideration. We are not great believers in the efficacy of the legal regulation of such matters, for it brings with it many evils, but we welcome heartily the recommendation of the English commission that the oyster-growers and dealers themselves unite for the protection of their products from sewage contamination. They owe it to the public, and, besides, to look only at the sordid side of it, if the present uncertainty in the public mind with regard to the possible contamination of oysters continues, there will be a large falling off in their consumption. If the notion once gains credence that oysters are absolutely safe eating only when cooked, the injury done to the oyster trade will be almost incalculable.

**LAPAROTOMY FOR PENETRATING WOUNDS OF THE ABDOMEN.**

Two recent discussions bring this subject prominently into notice once more. Professor Senn is reported by our Chicago correspondent (*MEDICAL News*, December 3) to have said that a certain number of gunshot wounds of the abdomen recover without operation, and that a man shot from before backward at the level of the umbilicus or above it has a fair chance of recovery without operative interference. He has held this opinion now for several

years, has confirmed it experimentally and strengthened it by his experience during the Spanish-American War.

In our issue of last week we report the discussion of the same subject at this year's meeting of the Southern Surgical and Gynecological Association. This association adopted unanimously at its meeting last year a resolution to the effect, that in penetrating wounds of the abdomen it is the duty of the surgeon always to make an exploratory incision, so as to definitely determine whether the abdominal viscera have been seriously injured or not. This year's discussion brought out very clearly the fact that our Southern brethren, whose opportunities for seeing gunshot wounds of the abdomen are comparatively much greater than those of Northern surgeons, are still practically unanimous in declaring for laparotomy in every case. Even Dr. Parker, who had seen recovery without operation in about fifty per cent. of the penetrating wounds of the abdomen received during the recent war, still believes in laparotomy *in every case* in civil life. In active warfare circumstances are different. The wounds produced by the small bullet with high velocity of the modern military rifle are not always such as permit extravasation of the contents of hollow viscera and do not seriously tear, as often as might be expected, important blood-vessels. During the recent campaign, too, the facilities for abdominal operative work were necessarily imperfect so that expectant treatment was under the circumstances very good conservative surgery.

In civil life, however, gunshot wounds of the abdomen are often produced by large caliber bullets, of comparatively low velocity, whose lacerating power is increased by their carrying with them portions of clothing (something the rifle bullets during the war did not do). When such wounds are treated in a hospital where all the facilities are at hand for aseptic exploration, it seems taking needless risk not to make assurance doubly sure by actual inspection. Exploratory laparotomy in every case would certainly decrease the mortality, for even Professor Senn admits that in his experiment in only four out of sixteen cases did the intestines escape injury, even with the wounds above the umbilicus. A perfectly aseptic exploratory laparotomy ought, on the other hand, to add practically nothing to the patient's

risk if proper precautions are taken to avoid shock, by exposing the intestines only as little as possible during careful exploration, and by making provision for keeping them at body temperature.

To wait till symptoms of perforation show themselves is to invite a fatal issue in nearly every case. The symptoms immediately following the injury are almost invariably dubious in the extreme, so that no rule of safe guidance for operation can be drawn from them. A great many lives would undoubtedly be saved by immediate laparotomy. The mortality of the cases that proved after exploration to have no intestinal perforation or serious bleeding-points would practically not be raised, so that despite our war experience the old rule as to immediate laparotomy for penetrating wounds of the abdomen seems a very proper one. Especially is this true if the wound has taken place within a couple of hours after the taking of a full meal. It seems unquestionable that some of the favorable results of abdominal gunshot wounds during the late war, were due to the fact that soldiers received them after fasting for long periods, or that the wounded were suffering at the time from some form of diarrheic trouble, which, while decreasing their appetites, secured a thorough emptiness of the intestines in other ways. Even a defective quartermaster department and the tendency to intestinal diseases among soldiers do not seem in this view to be entirely without their compensation or their places in Nature's conservatism. Such factors must not, however, be allowed to influence to any serious extent the surgical policy that will obtain for the next few years in the treatment of abdominal gunshot wounds in civil life.

#### THE PHYSICIAN AND HUMANITY.

THE American Humane Association met in Washington last week and the event was made the subject for editorial comment by most of the medical journals of the country. The tone of the editorials generally might lead the casual reader to think that physicians, or at least medical editors, are unalterably opposed to the movement for the prevention of cruelty to animals. This is far from being the case. Medical men as a whole are deeply interested in everything that will lessen the sum of the world's suffering whether among human beings or our

brothers of the brute creation. Force of circumstances alone has put us in the false position of seeming opposition to the Humane Association's work.

An unreasoning fanaticism is endeavoring to secure such regulation of animal experimentation as will practically nullify its scientific work. As medical men we are convinced that a great deal has been and still more will be done for the relief of human suffering by animal experimentation. This will involve the infliction of a limited amount of pain on a limited number of animals but will save many a precious human life and many an hour of human agony. We weigh the one against the other. Like the great physiologist Ludwig, whose discoveries were all made by means of animal experimentation, though he was the President of the Leipzig Society for the Prevention of Cruelty to Animals, we feel a humane interest in animal suffering and yet find ample justification for encouragement of what our opponents are pleased to call vivisection.

It would be ideally better perhaps, if we could stop animal experimentation, but pain is a necessary evil in the present dispensation and the purposeful infliction on animals of slight amounts of suffering leads to the saving of large amounts of it to human beings. But it is not alone human suffering that has been lessened by such experiments. The amount of pain inflicted by scientists bears no ratio to the amount of torture from disease that has been saved animals themselves by the observations upon their fellow brutes.

There is a spirit abroad in English-speaking countries that is growing in strength and that augurs ill for the continuance of that freedom of investigation so necessary to successful scientific research. The growth of this spirit is partly due to the persistent propaganda of their notions by fanatic anti-vivisectionists, but is more to be attributed to a failure on the part of people generally to understand what is meant by animal experimentation. It is known that large numbers of animals are used for experimental purposes. It is supposed that they die in awful torture from disease and operative procedures. This is not the case and the chance to see the actual workings of one of these experimental laboratories would be the best proof of it that could be had.

Most of the stock in trade of the professional an-

tivisectionist, the stories of horrible torture, burning, mutilation, etc., are drawn from times long since gone by. Some suffering there is but the dreadful torments are figments of a too vivid imagination. Stevenson the well-known English novelist was, as might be expected from his tender sympathies, an ardent antivivisectionist. Once while on a visit to this country, he spent some time in a well-known sanitarium for consumptives. While there he learned that the physician in charge was experimenting on guinea-pigs with the then recently discovered tubercle bacillus. His first impression was one of shinking from the physician of whom he thought so much. His health necessitated his staying, however, and gradually he learned to appreciate all that might be accomplished for suffering humanity by observation of animals suffering from the same disease. He learned especially that Koch's demonstration of the bacillus tuberculosus, which could not have been made without tests upon animals, enabled the physician to detect the first onset of the disease, and often, though not as often as he might wish, to prevent its fatal progress. With opportunities of observation similar to those of Stevenson, most antivivisectionists would cease their propaganda. There are some, we are sorry to say, on whom even this would have no effect.

Is not the pledge of a practically unanimous medical profession a sufficient guarantee that by animal experimentation a great work is being accomplished for science and for humanity? Much of the unselfish, because disease preventive, work of the modern science of hygiene has been made possible through animal experimentation and the medical profession has encouraged it though the diminution of disease meant lessened revenues.

Much of the animal experimentation is carried on at great risk of disease or even death, if the slightest precaution should be neglected, yet there has not been lacking in recent times members of the profession to fill up the ranks and take the martyrs' places. Has the medical profession not the right then to ask that the regulation of animal experimentation shall not be allowed to pass into such hands as will seriously hamper or practically prevent it?

The recent meeting of the American Humane Association at Washington had for one of its main objects the discussion of means to ensure the passage

of the Senate bill to regulate animal experimentation in the District of Columbia. It is there that the Government laboratories are situated, so that the falsely called regulation would mean the prevention of scientific work; besides the passage of such a bill is acknowledged by antivivisectionists to be but the entering wedge to secure legislative enactment elsewhere. Hence our opposition to this particular effort of the Humane Association, and hence the request that every medical man use any influence he may possess on Senators to prevent the passage of the bill in question.

#### THE STATION-HOUSE VERSUS HOSPITAL.

ANOTHER one of those unfortunate cases which turn up every now and then, of a man suffering from some ailment that renders him unable to account for himself being locked up as drunk, has recently occurred in our city and is attracting a good deal of public attention. It happens that the person involved was of some prominence, being officially connected with the consulate of a foreign government. There is to be, it is said, a rigid investigation. A number of such cases we are sure happen each year and are glossed over in the police records without any call for investigation. We hope that the present case, by the publicity that will be given it, will do something to make the police more careful in the matter of committal to the station-house of supposed "drunks" who ought to be taken to a hospital as "dangerously ill."

There is scarcely a large city in the world in which each year there does not eventuate at least one case in which the neglect of the guardians of the peace in this matter may not be considered as directly responsible for the fatal termination of an illness or at least the serious jeopardy of life. In the present case it was said, on the part of the police, that even though there may have been cerebral hemorrhage or cocaine intoxication the man certainly had taken liquor. Of the truth or falsity of this statement we know nothing, but it is certainly no justification for imprisonment during illness, that the patient is slightly under the influence of liquor. Indulgence in alcohol may have been the immediate cause of the condition that has developed, be it cerebral hemorrhage or diabetic coma or uremic symptoms, yet this constitutes no excuse for the patient's committal to a station-house when he ought to be taken to a

hospital. Especially should it be insisted upon that the odor of alcohol on the breath must not be taken as a criterion as to whether the man is drunk or not. The taking of a certain amount of alcoholic beverages with meals has become too common in this country for any such eminently fallacious symptom to have any further weight.

This matter is extremely serious; it may easily involve human life. The problems it presents are likewise difficult. Experienced medical men have been deceived time and again into making a false diagnosis of alcoholic intoxication when something quite different was the matter, though there may have been the odor of alcohol about the patient. The certain differentiation often requires the highest diagnostic skill. Familiarity with conditions of intoxication on the part of the unskilled does not beget a special faculty for differentiating allied conditions, but rather superinduces a disregard for even striking pathological symptoms and a tendency to dispose of the cases summarily by putting them at once under the rubric, drunk.

The police must be thoroughly imbued therefore with the idea that the slightest suspicious symptoms in a case picked up on the street, where no explanation of circumstances is available, calls for medical examination. There can be no excuse for neglect of this important precaution. Police surgeons are ready at call, and a hospital ambulance with its surgeon may be had in a few minutes. At times this care would lead to useless trouble for the case would prove to be only a drunk after all. But it is infinitely better that such calls on medical skill should be made dozens of times needlessly than that one real sufferer should have to pass the night in the comfortless cells of a station-house.

#### ECHOES AND NEWS.

*Gift to the Polyclinic.*—A handsome oil painting of the late Professor R. C. M. Page has been presented by his widow, Mrs. Page, to the New York Polyclinic.

*Five Thousand Dollars for a Pathological Laboratory.*—Dr. E. D. Morgan has given \$5000 for the equipment of a pathological laboratory in the Bussey Institute at Harvard, of which Professor Theobald Smith is the director.

*Deaths of Soldiers at Manila.*—The last sanitary report from Manila states that during the previous week there had been only two deaths among the soldiers, one of typhoid

fever and one of cerebral hemorrhage, the result of an accidental fall.

*Presentation to the New York Academy Library.*—Dr. A. Jacobi has presented to the library of the Academy of Medicine for Dr. Voss of Germany a copy of the original edition of Gasparo Aselli's book "De Lactibus," a very rare bibliophilic treasure.

*Professor Röntgen Goes to Leipzig.*—Professor Röntgen, whose discovery of the X-ray brought him so much fame, has resigned his position as Professor of Physics at the University of Wurzburg to take the Chair of Physics at the University of Leipzig.

*Defective Christian Science.*—If Christian Science is a science at all, it should embrace not one but all divinely appointed means of healing, and for it to reject the remedies shown to be efficient by centuries of medical experience, savors more of self-conceit than it does of the humble faith which it claims as its merit.—*New York Sun.*

*Another Medical Playwright.*—Sir Thomas Grainger Stewart, former president of the British Medical Association, Professor of Medicine in the University of Edinburgh, and one of Her Majesty's physicians in Scotland, according to recent advices, has just completed a chronicle play, entitled "The Good Regent," which will be published shortly by Blackwood & Sons.

*A New Test of Death.*—The sensational subject of premature burial has been attracting considerable attention in Russia and Austria, where several cases have recently been reported, and the need of a scientific test of death has suggested the use of Röntgen-rays. The slightest movement of the heart blurs the skiagraph, and in Paris the X-rays have already been successfully used as a test of death.

*A New Fad in Diet Reform.*—The "Simian School" of Michigan tends very closely to strict vegetarianism. They grind nuts into various flours and meals, make combination foods of nut-meals and dried fruits, issue recipes in which the chief ingredients are nut-meal or flours, fruits fresh and dried, honey, sugar, milk, cream, butter, cheese, and buttermilk. Most of the followers object to meat as a food, but tolerate it when employed medicinally.

*Recent Appointments in New York Hospitals.*—Dr. Robert H. M. Dawbarn has been appointed visiting-surgeon to the City (Charity) Hospital. Dr. Thos. H. Manley has been reinstated as visiting-surgeon to the Harlem Hospital, and Dr. H. M. Silver has been reappointed to the visiting staff of Gouverneur Hospital. It has been reported, but upon how good authority we know not, that the last two appointments inaugurate the beginning of the establishment of the *statum quo ante*.

*The Skin and Cancer Hospital.*—At the recent annual meeting of the New York Skin and Cancer Hospital officers were elected for the ensuing year. Reports were

received and read from the committees and departments of the hospital in relation to the work of last year. The year has been a notable one for the institution on account of the completion of its new building, at Nineteenth Street and Second Avenue, which has been built from the proceeds of the real estate formerly held by the hospital.

*Corpse Found from Coroner.*—Coroner Apgar of Peekskill, N. Y., having been notified that a man was lying dead alongside the highway some five miles out of town, secured an undertaker, and with him drove out to the place where the corpse was said to be lying. In the meantime, the man who had been reported frozen to death had thawed out. When he showed signs of life and was told that the coroner and an undertaker were coming, he pulled himself together, "took a hitch in his belt," and left in a hurry.

*To Check Tuberculosis.*—There has been a great deal of talk recently of the need of some widespread action to cope with the increasing ravages of Great Britain's national disease, consumption. The Prince of Wales summoned a private meeting at Marlborough House December 20th to promote a war against tuberculosis. The Marquis of Salisbury and a number of famous medical men were present and participated in the proceedings. The spread of the gospel of cleanliness is a most excellent vocation for even the Prince. It is to be hoped that his efforts will take that direction.

*Scientific Poisoning.*—Sir James Crichton Browne, M.D., recently delivered an address on poisons and poison legislation before the Pharmaceutical Society of Great Britain, in which he pointed out that notwithstanding the remarkable progress of toxicology and the vast increase in the number and variety of deadly agents at the criminal's disposal, the poisoners of to-day, for the most part, use the same poisons as those by which murder was oftenest accomplished in olden times. Women and medical men, says Sir James, are the classes which have supplied the most numerous and most notorious poisoners.

*Empress Loses Flesh and Health.*—The Empress of Germany for some time has been using thyroid tablets as regular treatment for obesity. While she has succeeded in reducing her weight, she has been suffering seriously in general health, is becoming nervous, and is threatened with heart trouble. It is said that the Emperor, therefore, has induced her to stop using the remedy. The experience of the profession in this country emphasizes the opinion that thyroid extract is a serious heart depressant, that it should be prescribed with caution, carefully watched, and administered in conjunction with heart tonics.

*Election of Officers of the New York Academy of Medicine.*—At the meeting of the New York Academy of Medicine, held on Thursday, December 15th, the following officers were elected for the ensuing year: President, Wm. H. Thomson; vice-president, Hermann Knapp; trustee, E. G. Janeway; treasurer for the trustees, W. F. Cushman;

member of committee on admission, R. H. Sayre; member of committee on library, A. Caillé; delegates to the State Society, J. H. Huddleston, E. Lefevre, L. F. Bishop, J. A. Booth, James Ewing. Dr. Abraham Jacobi had withdrawn his name from nomination for the office of trustee.

*The New Gas in the Air "Etherion."*—The new gas which Mr. Charles F. Brush thinks he has discovered he has named etherion because it seems to possess some of the wonderful properties of the ether, which by hypothesis is the conducting agent through space of heat, light, and electric radiations. This is the fourth new substance, if the discovery is substantiated, found during the last few years to exist in the very air we breathe. It is the third new element that discoverers claim to have demonstrated in the atmosphere during the present year. This active awakening in inorganic chemistry can scarcely fail to have significant results for medical, especially physiological, chemistry.

*The Antivaccination Law Criticised.*—The new law enabling conscientious objectors to escape vaccination by making a statutory declaration has been availed of to exempt thousands of children from vaccination. Sir Richard Thorne, the principal medical officer to the Local Government Board, London, in his official report on vaccination during the last year, announces that one-third of the children in England and Wales have escaped vaccination. He predicts that the country is being prepared for widespread epidemics of smallpox, such as are unknown to the present generation. It is suggested, in order to counteract the antivaccinationists, that insurance companies refuse to issue policies to unvaccinated people.

*Meeting of the New York Medical League.*—On Friday evening, December 16th, the Manhattan Section of the New York Medical League met and discussed the subject "Midwives and Their Illegal Practices." W. A. Purrington, Esq., read a paper on "Some Legal Aspects of the Midwife Question." Mr. Elbridge T. Gerry's paper on "Midwives as Illegal Practitioners" was, owing to Mr. Gerry's illness, read for him. Dr. Theodore K. Tuthill read a paper on "Ways and Means of Dealing with the Illegal Practices of Midwives." A very interesting discussion followed. Owing to pressure on our columns this week we are unable to reproduce the abstract of the papers and discussion, but shall do so next week with editorial comment on the question.

*Medical-Expert Evidence.*—Justice John Woodward, in a paper on "Medical Expert Testimony," read before the one hundred and thirty-eighth meeting of the New York Society of Medical Jurisprudence, defended the present procedure. "A radical change," said the Justice, "is neither desirable nor possible. Every system of evidence must admit expert testimony, and all expert testimony is subject to human limitations. The medical profession must exalt the expert by investing in him as their representative all the dignity of his order. If he prove untrue to their confidence they should know what course to take to preserve their purity. The law, on the other hand,

should invest the position with every safeguard, that the expert may not be influenced by bias, self-interest, or compulsion."

*The Queen of Portugal; a Withdrawal and Apology.*—The *British Medical Journal* confesses to having been the original publisher of the story that the queen of Portugal was studying medicine and that her first patient had been her husband, under treatment for obesity. The statements were formally contradicted by the Lord High Chamberlain of Portugal, and the Journal endeavored to set the matter right, but the story has been on its travels for some time. "There does not seem to be," quoth the editor of the *Journal*, "in the world of journalism, a bourne from which no traveler returns." We sympathize with the aggrieved editor, whose "bad pennies" come back to him thus inevitably despite his regret for their *utterance*. And as the MEDICAL NEWS has innocently been one of the guilty parties we make our humblest apologies to the Queen of Portugal and withdraw the story.

*Contract-Surgeon in the United States Army.*—For those seeking appointment the following requirements are exacted by the Board of Examiners: Evidence of graduation at a regular reputable medical college, diploma to be submitted to the board. Proof of hospital or other professional experience will be of benefit to the candidate. Candidates must be in good health, of reasonably sound physique, and citizens of the United States. The examination is of a practical nature, embracing hygiene, practice of medicine, pathology, and surgery. In addition, a thesis on some professional topic will be prepared by the candidate. The pay of acting assistant-surgeons is \$150 monthly. The applicant must be free from physical defects which would incapacitate him from the military service. For further information address Major H. S. Kilbourne, surgeon, United States Army, Army Building, 39 Whitehall Street, New York City, President of Board of Examiners.

*Dr. Archdale Reid on the Temperance Question.*—Dr. Reid, in a pamphlet, assumes that inborn or congenital characters only are transmitted to the offspring, while acquired characters are not transmitted. Man is still undergoing evolution at the present day, and this consists in the main of acquiring immunity against disease or the effect of powerful drugs, including harmful narcotics. Man is being evolved in the direction of decreasing his normal craving for alcohol. In proof of this theory, Dr. Reid states that where wine is most plentiful, as in Southern Europe, there is less drunkenness than in countries where alcoholic stimulants are more difficult to obtain. The novel view is advanced that anything that tends to restrict the supply of alcoholic beverages will tend toward perpetuating drunkenness. The innate drunkard, when discovered by allowing every one free access to alcohol, must be treated as a lunatic, and not allowed to procreate. By artificial selection, then, the alcohol-tainted "germ-plasm" will finally be eliminated, and we will see the human race entirely immune to alcohol.

**A Correction.**—In making our announcement last week in reference to the articles on garrisoning the tropics, we stated that Dr. Azel Ames was going out to Puerto Rico as chief medical officer on the staff of General Henry. This was an error. Dr. Ames writes: "In the performance of my duty I shall be a plain acting assistant-surgeon of the United States Army under the orders of the chief surgeon of the department, Lieutenant-Colonel John Van R. Hoff, surgeon United States' Volunteers (major and surgeon United States Army), who not only most ably fills the position, but is a competent sanitarian under whom it is a pleasure to serve. . . . To the cordial and highly intelligent support given at all times by General Henry to sanitary work, and the competent supervision and cooperation of the chief surgeon, the greater part of such results as have been achieved with the army and people of Puerto Rico in sanitary affairs has been due, as it must be for the future." Dr. Ames was formerly Sanitary Inspector in the Department of Ponce. His field of operation will now embrace the entire island.

**A New Official Position for Doctors.**—One of the contestants in a recent prize-fight in England died shortly after receiving a blow on the chest. The fighting had not been severe and the blow was not such a one as in experts' minds was calculated to do serious harm. Moreover post-mortem examination disclosed the existence of an extremely small heart. The jury brought in a verdict of accidental death but with the "rider" that in future boxing contests the contestants' conditions should be carefully examined and their fitness certified to before the contest be allowed to take place. This will constitute a new set of duties for physicians for which a certain amount of special training may be required. Some time ago in France a book appeared on the etiquette to be observed by the surgeon called in attendance on a duel. If the English Coroner's jury's recommendation prove effective, we may look for pamphlets and manuals on "the proper conduct of the physician when called to attend an exhibition of the manly art." May we add that one of the indispensable qualifications will not be to be an expert in aphasia.

**Climate and Conditions in Manila.**—The following from an American naval officer who visited the Philippines shortly before the breaking out of the recent war will be of special interest now that it is definitely settled that the islands are to be ours. It gives in brief a good notion of how different the conditions are there from what obtains here, and how promptly intending settlers will have to change their ideas as to business hours if they are to retain their health during their residence in the tropics: "The climate of the islands is healthy but hot. The maximum range of the thermometer is 103° F., but a sea breeze usually sets in about 5 P.M. and lowers the temperature. The greatest annual rainfall recorded is 114 inches, the least 84. There are 323 Europeans and Americans, 4506 Spaniards, 16,520 Chinese, 47,662 Chinese Mestizos (half-breeds), 4963 Spanish Mestizos, and 200,966 pure natives in Manila. The population seems to be divided into the clergy, the officials, the half-

breeds, and the native Indians. The business hours are from 5 to 9 in the morning and from 5 P.M. to midnight. The middle of the day is devoted to quiet lounging and sleep."—"An American Cruiser in the East," by John D. Ford, 1st Engineer of the Pacific Station, U.S.N.

**This Is Not the Stuff of Which Martyrs Are Made.**—Mrs. Eddy, the "mother" of the Christian-Science Church, has written a letter to the *New York Sun* which concludes as follows: "To be stoned for that which our Master sought to designate His best works, saying, 'For which of these works do ye stone me?' is thereby to make known the best work of Christian Science." Let us see how likely Mrs. Eddy is to wear the martyr's crown. She is engaged in the business of selling a book which has now passed its 153d edition. The price of this book is \$3 (\$3.18 by mail); this book can be put on the bookstore shelf at a cost of less than forty cents. She also sells a number of other works at proportionate rates. For many years she ran a "metaphysical" college, and her students paid well for the privilege of learning how they could in their turn profit by the propagation of Christian Science. She preaches the unChrist-like doctrine that "no one has any business to be poor." She communicates with the outer world through her "counsel, Judge So-and-so," etc. And Mrs. Eddy claims to be a disciple of Jesus Christ! What an excessively malodorous business it is, and how repugnant to people of true religious instinct.

**The Plague in Samarkand, Russia.**—Prince Alexander, who went out to Samarkand by order of the Czar, as president of the commission appointed to take measures against the bubonic plague, reports that he found in the village of Anzob, where the plague was raging, a hospital had been established and proper quarantine regulations inaugurated. The local doctors have pronounced the disease bubonic plague. To prevent the further extension of the plague three lines of medical stations have been established on the various routes leading from the infected town. Flying medical military detachments supervise these stations, as well as the whole of the surrounding districts. In anticipation of the possible spread of the disease, reserves of doctors and nurses are being summoned in the principal cities of the empire, who must be ready to go at a moment's notice. At present these reserves consist of 100 doctors and 80 nurses. All the means for inoculation according to Jersen's system are supplied in abundance; also the remedies of Kharkin are being prepared in the Imperial Institute of Experimental Medicine at St. Petersburg. The doctors have been instructed to use these and to publish them among the population. Of the 357 inhabitants of Anzob, 233 have died. Since October 22d there have been no new cases. There are in all fourteen cases at present.

**An English Medical Hero.**—The Victoria Cross has been recently conferred upon Surgeon William Job Maillard, M.D., of the Royal English Navy, for conspicuous bravery during the outbreak at Candia, on September 6, 1898. The act of courage for which he was recommended for

this highest and most exclusive distinction for bravery in the world was as follows: During the landing of seamen from Her Majesty's ship "Hazard" Surgeon Maillard, who had disembarked and reached a place of safety, returned through a perfect deluge of bullets to the boat and endeavored to bring into safety, Arthur Stroud, ordinary seaman, who had fallen back, wounded, into the boat, as the other men jumped ashore. Surgeon Maillard failed to bring Stroud in only through the boat being adrift, and it being beyond his strength to lift the man (who was almost dead) from off so unstable a platform. Surgeon Maillard returned to his post with his clothes riddled with bullets, though he, himself, was unhurt. Such are the glorious deeds, and they are not few in number, that have finally won from the military authorities of England that recognition for the Army medical corps that it deserves. Until recent reforms the men who did them were sneered at as non-combatants and superciliously considered not to be equals of the men who did the fighting.

*A Second Death from Hydrophobia.*—We reported some weeks ago the death of August Bombadi of Astoria, aged five years, from what was supposed to be hydrophobia. We now have to report another, that of Otto Quast, aged five. Both cases occurred in children too young to have been frightened into hysterical convulsions in the midst of which some intercurrent affection might carry them off, so that the ordinary explanation given for American hydrophobia cases in these instances falls to the ground. The little Bombadi had not been specifically treated. Otto Quast had been under treatment at the Pasteur Institute of New York, but the bite was on the cheek and the prognosis of head bites being very unfavorable even with prompt treatment, the parents had been told that the treatment was not sure to prevent the development of the disease. Three other persons, two children, respectively four and eight years of age, and a young man of seventeen, were bitten during the same day as these children, October 19th, in the same neighborhood and presumably by the same animal. Young Quast's father had also been bitten quite severely, but on the hand, by the large brown dog that had attacked his son. The wounds of all four of these are on the arms and hands, which are not so dangerous. They promptly underwent the Pasteur treatment so that further fatal results are not to be feared. The series of cases is an extremely interesting one, however, and we shall endeavor to secure further details of them so as to make them available for thoroughly scientific medical criticism.

## SPECIAL ARTICLE.

### BACILLARY CONTAMINATION OF OYSTERS.

THE third and final report of the Committee of the British Association for the Advancement of Science appointed to report on the "Elucidation of the Life Conditions of the Oyster under Normal and Abnormal Environment, Including the Effect of Sewage Matters and

Pathogenic Organisms," has been drawn up and presented by Professor Herdman, Professor Boyce, and Dr. Kohn.

In nine out of nineteen samples of oysters examined a colon-like bacillus was isolated from the interior of the oysters. In some samples there was almost a pure culture of the colon bacillus. Careful investigation shows that some of the organisms in the colon-bacillus groups thus isolated are much more closely related to the bacillus of typhoid fever than are others. For instance, while the typical colon bacilli coagulate milk, form indol and gas, and give a decided acid reaction as well as an abundant growth upon potato, groups of the bacilli were isolated which did not exhibit all of these qualities. Indeed, one group of very active bacilli did not coagulate milk nor form indol, though occasionally forming gas, and gave rise to an acid reaction in two cases, and an alkaline reaction in three cases. This group of colon bacilli and some of the others in a less degree were suspiciously like typhoid bacilli, but the serum reaction, carefully tried, always gave negative results so that it was not the true typhoid bacillus.

The presence of the colon bacillus and its congeners usually means sewage contamination. A previous report of this committee has shown that oysters kept in water into which sewage drained contained many more micro-organisms than those of the same variety kept only a short distance away in pure water, and that oysters were able to make use of sewage as food material.

There is evidently, therefore, need of regulation in the matter of oyster growing. The committee recommend either that restrictive legislation be called in and oyster-beds be licensed only after due inspection by Government officials, or that an association be formed among oyster-growers and dealers themselves, which shall provide for the due periodic examination of the grounds, stores, and stocks by independent, properly qualified, inspectors. The commission is of the opinion that the scientific assistance and advice given by such independent inspectors would go far to improve the condition of the oyster-beds and layings, to reassure the public and to elevate the oyster industry to the important position which it should occupy. The concluding recommendation is that other forms of shell-fish, and the grounds from which they are gathered, should be periodically examined by scientific inspectors in the same manner as the oyster-beds, precautions being just as needful, perhaps more so, for these as for the oysters.

## CORRESPONDENCE.

### THE COLOR OF NEGRO BABIES.

To the Editor of the MEDICAL NEWS.

DEAR SIR:—The editorial in the MEDICAL NEWS December 10th, entitled "The Lancet and the Color of Newly Born Negro Children" recalls an incident which occurred at a lecture on obstetrics at the College of Physicians and Surgeons, New York, a few years ago.

Professor J. W. McLane had brought a newly born colored child, a day or two old, into the lecture-room to illustrate his remarks on the subject of the lecture. The

child's color was anything but black or white, but it approached most closely to a dark salmon color.

The professor held the piccaniny at arm's length and in his peculiarly delightful manner asked the class what the baby's color was. Some said white, while others said black. To both of these responses the witty professor shook his head in the negative and in true Irish fashion, remarked, "It's nather; its red."

Dr. McLane then added that as a rule piccaninnies were red at birth while white children were gray.

Very respectfully,

A. L. WOLBARST, M.D.

NEW YORK, December 17, 1898.

*To the Editor of the MEDICAL NEWS.*

DEAR SIR:—The color of a newly born negro child is what we term a light "ginger-cake" color. This light color prevails, as a rule, even if both parents are typical blacks, almost as much so as when mixed with a large percentage of white blood. There are a variety of shades from the darker to very light, almost indistinguishable from the color of a child of white parents. I have never seen a newly born negro child black; though a few are dark they are always lighter than their parents. Often it would be a difficult matter to decide whether the child was of white or negro origin unless the parents were known. My attention has frequently been directed to their color, so much so as to cause me to ask if the child did not have a white father.

On examination, generally, small areas of darker or almost black skin will be found, especially about the genital organs, if a male, and around the anus. The prepuce is generally very dark or black.

D. M. PROVENCE, M.D.

BARWELL, S. C., December 15, 1898.

*To the Editor of the MEDICAL NEWS.*

DEAR SIR:—To relieve the perplexity of the *Lancet*, and in the interest of accurate observation of minor points in practice I shall proceed to state the color of a new-born full-blooded negro baby. I have delivered a score or more of the little problems this year and speak from ocular demonstration. A new-born full-blooded negro baby is neither white nor yet is it black but is of a dusky red color. In some, though not all, the scrotal integument and that about the flexures of the principal joints is black at birth, but the general surface is of a dusky red.

Respectfully,

C. J. MARCH, M.D.

FORDYCE, ARK., December 12, 1898.

**HARVARD NOT THE PIONEER.**

*To the Editor of the MEDICAL NEWS.*

DEAR SIR:—In the issue of the *MEDICAL NEWS* for December 10th occurs the following sentence with regard to the building of an infirmary for Harvard: "Harvard is to be congratulated on being a pioneer in this as in so many other things that tend to make student life more livable." If in the place of *Harvard* you put *Cornell* you will be correct. Last year Dean and William Sage

gave to Cornell University the mansion of their late father, as a memorial to him, to be used as an infirmary; and they not only fitted it up and equipped it for that purpose but for its perpetual maintenance they presented with it an endowment of \$100,000. A description of this building may be found on pages 56-58 of the Annual Report of the President of Cornell University for 1897-98.

Respectfully,

W. I. HOAG, M.D.

INDIANAPOLIS, IND., December 12, 1898.

[Honor to whom honor is due. Cornell University is evidently the pioneer in this beneficent work.—ED.]

**OUR PHILADELPHIA LETTER.**

[From Our Special Correspondent.]

**AN INFLUENZA EPIDEMIC—SMALLPOX IN PENNSYLVANIA—CONTAGION AND INFECTION—BOTTINI'S OPERATION—DISSECTING ANEURISM—THE WIDAL REACTION—FREE HOSPITAL FOR CONSUMPTIVES—CHARITY BEQUESTS—PERSONAL NOTES—HEALTH STATISTICS.**

PHILADELPHIA, December 20, 1898.

WHILE we have been accustomed, ever since the epidemic of 1889, to call any severe "cold" a case of the grippe, there is now a genuine epidemic of influenza in this city. It seems to be of a mild type, but the rapidity with which it is spreading makes it seem likely to prove quite a factor in the list of winter affections this year.

Smallpox has broken out at Bedford and Huntingdon, about thirty cases having been reported thus far. General vaccination and house quarantine have been ordered by the State Board of Health which, it is hoped, will check the epidemic.

At the same meeting Dr. Lawrence F. Flick, in a paper, entitled "Contagion; Its Meaning and Limitations," attempted to define the exact difference between the words "infection" and "contagion." He believes the key to a distinct understanding lies in going back to the original definite use of the words, thus including the greater number of diseases under the first head. Contagion, according to Dr. Flick, should be applied to those diseases which are transmitted without the aid of an intermediate host, an unbroken chain, while infection must entail the lodgment of the organism in an intermediate host. He also made a division of diseases under these headings, though he admitted that this was difficult, if not impossible.

Dr. Augustus A. Eshner, in the discussion, took an opposite view believing that "contagion" should be restricted to disease spread by actual contact and, further, he classified the parasitic skin and intestinal diseases as "invasion diseases." Dr. Solomon Solis-Cohen also disagreed with Dr. Flick, and probably expressed the views of most medical men when he said that he favored classifying diseases as "infectious," with a subdivision of some as "contagious."

Dr. A. Feree Witmer read a paper on "Aphasia from an Unusual Cause," and exhibited the patient, a young boy, whose symptoms had come on after an epileptic convolution. Paraplegia had been present also and the case

seemed to have clearly been caused by a cerebral hemorrhage occurring during an epileptic attack.

A report on "Bottini's Operation for Enlargement of the Prostate Gland; Exhibition of Instrument" was presented by Dr. A. J. Downes. The operation was performed with Freudenberg's modification of Bottini's instrument, which consists of a hollow bougie in which a cautery-knife, having electrical attachments, is concealed and through which a continuous stream of ice-water flows to keep the instrument cool. After introduction, the blade, which has been heated to a cherry red, makes the desired number of incisions, hemorrhage being almost *nil*. Dr. Downes introduced half an ounce of a four-per-cent. cocaine solution into the urethra, preferring to use this large amount and washing the excess away rather than to allow a less amount to remain. His case was most successful.

At a meeting of the College of Physicians, held December 12th, Dr. Judson Daland reported a case of "Dissecting Aneurism of the Thoracic Aorta," occurring in a male, aged thirty-eight years, who gave a clear history of alcoholism. The aneurism had caused death finally by rupturing into the pericardium. During the time the patient was under observation, he had presented symptoms of mitral regurgitation, arteriocapillary fibrosis, and chronic nephritis.

Most favorable results were reported by Drs. Sailer, Campbell, and Grissinger, with the Widal reaction. A wet method, by using a Thoma-Zeiss pipette, was found preferable to the dry and, Dr. Sailer believes, is much more reliable. In the discussion Drs. Scott and Daland said they had seen cases of various other infections in which an equally positive and erroneous reaction had been yielded. Drs. Osler, Stengel, and Eshner spoke of the occasional delayed appearance of the reaction.

The Philapatrian Ball, which is to be held February 13th, will be for the benefit of the Free Hospital for Consumptives. Dr. Lawrence F. Flick, President of the Pennsylvania Society for the Prevention of Tuberculosis, is also president of this hospital, which was organized in 1895. The hospital devotes all money received to placing patients in already existing institutions thus saving the expense of erecting buildings. Philadelphia, including its almshouse, has only about 200 beds for this unfortunate class of people, most hospitals refusing to take cases, and the amount of good accomplished by the Free Hospital can hardly be overestimated.

By the will of Eliza W. S. P. Field, who died in England about a year ago leaving the bulk of her estate to charity, the following bequests to institutions in this city were made: Home for the Incurables, \$10,000; Germantown Hospital and Dispensary, \$500; Children's Hospital, \$1000; University of Pennsylvania, for two scholarships, \$10,000; for a free bed to be known as the John White Field bed, \$5000; the Abbey Willing Peters bed, \$5000, and for the Hospital, \$20,000. The Maternity of the University receives \$10,000 also, and for general purposes \$10,000 more is given.

Dr. M. S. French, Secretary of the National Relief Committee, has left for the South to visit the various

camps, and Major D. C. Peyton, who has charge of the Government hospital work in Philadelphia, has gone to his home in Indiana on leave of absence for two weeks.

Dr. J. J. Gurney Williams, senior resident-physician of the Episcopal Hospital, was extensively burned while using the X-ray apparatus last week. The burned surface resembled that from ivy poisoning, and while not severe, was exceedingly painful.

Dr. John Lindsay, Secretary of the Philadelphia County Medical Society, is severely ill with pulmonary tuberculosis.

Dr. S. Weir Mitchell sailed for Europe last week on the "Kaiser Wilhelm."

Dr. Leonard Pearson, State Veterinarian, has gone to Pittsburgh to investigate an outbreak of hydrophobia. Dr. Benjamin Feicht died last week after having been bitten by a rabid dog and since then there have been two other victims.

The total number of deaths occurring in Philadelphia during the week ending December 17th, as reported at the Health Office, was 481, of which 118 occurred in children under five years of age. The total number of new cases of contagious diseases was 313, reported as follows: Diphtheria, 103 cases, with 28 deaths; scarlet fever, 32 cases, with 1 death; typhoid fever, 178 cases, with 16 deaths.

#### OUR LONDON LETTER.

[From Our Special Correspondent.]

POPULAR CLASSES AT THE MEDICAL MUSEUM OF THE ROYAL COLLEGE—THE STUDY OF TROPICAL DISEASES—SURGEON MAILLARD HONORED WITH THE VICTORIA CROSS—ELIMINATION OF THE SMOKE NUISANCE IN LONDON—RIDER HAGGARD'S "DR. THERNE"—FURTHER DEVELOPMENTS IN CONNECTION WITH THE ABORTIONIST BLACKMAIL SCHEME.

LONDON, December 15, 1898.

A DEPARTURE well worthy of imitation in the utilization of our medical museums in America may be seen here on Saturday afternoons. Every alternate Saturday half-holiday the Curator of the Museum of the Royal College of Surgeons devotes an hour and a half of his valuable time to taking classes of school-teachers, workingmen's clubs, and students of night-classes through the superb anatomic and physiologic galleries of the museum. The principal objects and specimens of interest are pointed out and a charming, popular lecture with demonstrations is made out of them. The parties often number forty or fifty persons, and the interest manifested is of the keenest. On certain afternoons of the week the normal rooms of the great osteologic collection of John Hunter are open to teachers and students in science classes, and those from the National "extension" school of science which has its headquarters at South Kensington are permitted quite extensive privileges in "getting themselves up" for examination in the spring.

The laity are becoming eager for enlightenment upon both physiology and pathology and we shall wrong our profession if we do not supply it freely, instead of leav-

ing it to the "treatises," "mothers' friends," and "confidential advice," of Warner, Pierce, Hostetter, *et al.*

The idea of the hospital for the study of tropical diseases seems to be almost as infectious as the maladies it is to have care of. Several of the London schools have intimated that they are prepared to offer all the facilities required in that line by colonial physicians, and now Liverpool announces similar intentions. Mr. Alfred Jones has offered the sum of \$1750 a year for a term of years for the lab oratory, and the Royal South Hospital is to furnish a ward for the cases. There ought to be no lack of material in Liverpool.

There appears to be some professional dissatisfaction with the methods of the Government in establishing the new School of Tropical Medicine. The present staff of the hospital utilized have issued a protest based upon the statement that they were not properly consulted before the departure was announced and their names published as teachers. On the other hand, certain medical colleges seem to be jealous of the honors thrust upon this small and little known hospital. We sincerely trust that the proverbial "differing" of doctors will not be exhibited in public and so hamper the scheme.

The Bradshaw Lecture was given this week at the Royal College of Surgeons by T. Pickering Pick upon "The Union of Wounds." He absolutely declined to limit the term "inflammation" to septic processes due to the presence of micro-organisms as proposed by Park and Roser, and took the position that every one of the five "methods" of wound-healing is due to inflammatory processes of greater or less intensity. This of course brought him face to face with the question whether this inflammation is really a pathologic process, which the lecturer after careful discussion decided in the affirmative. It is a "reaction of degeneration," a reversion of the cells to an embryonic type of reproduction and product, and results in the ultimate substitution of a lower form of tissue. Scar-tissue, although functionally physiologic is structurally and developmentally pathologic.

The "heroes of peace," or at least of peaceful occupations are getting their share even of official recognition at last. Queen Victoria has decided to confer the Victoria Cross upon Surgeon Maillard of the Royal Navy, for distinguishing bravery during the recent attack by the British iron-clads upon Crete. While the troops were being landed one of the sailors was wounded and fell back into the boat while the other men rushed on shore. Dr. Maillard who had reached a place of safety promptly dashed back through a perfect hailstorm of bullets to try to bring his patient into shelter. The man, however, was found to be in a dying condition and was too heavy for the brave surgeon to lift out of the drifting boat, so that he was obliged to leave him and return to his post. His clothing was cut to ribbons by the bullets, but he himself by a miracle escaped unhurt.

The military authorities seem to have profited by the storm of censure which their pig-headed refusal to grant a similar decoration to the surgeon of the Gordon Highlanders for similar heroism at Dargai, simply because he was a *civilian*.

A vigorous crusade has at last been set on foot against the smoke-fog nuisance in London. Sir Henry Richmond has organized a determined onslaught upon the vestries or parish councils to compel the enforcement of existing laws which rigidly limit the amount of black smoke permitted to be poured out by factories. Experts declare that by proper stoking and arrangement of flues to draw the smoke back through the furnace before permitting it to escape, black smoke can be absolutely done away with and with positive economy of fuel. The only obstacles are the carelessness of the men and the short-sighted stinginess of the owners. If this triumph could be achieved it would add greatly not merely to the comfort but also to the healthfulness of London in winter. One day of fog is depressing but two or three of it in succession sends up the mortality bills at once, not by respiratory diseases as is usually supposed by every one who has swallowed the reeking, woolly, vapor, but in all sorts of wasting diseases for the depression of vitality due to the absence of sunlight. The same effect may be noted upon our involuntary citizens, the animals at the Zoo; a black fog sends up their death-rate worse than the severest storm or the sharpest frost.

The verdict in the Harold Frederic case was about what was expected. The prosecution, at the close of the evidence, asked the court to dismiss the case against Miss Lyon who, though deluded, they believed to have been sincerely devoted to the deceased, and the Judge acceded and included Mrs. Mills, the "healer," on the ground of insufficient evidence. This really seems the wisest course for it was clearly shown that Harold Frederic though erratic, was fully competent to decide upon what form of treatment he preferred and had done so deliberately. In fact, we have the best of authority for the statement that he really had no confidence whatever in either Christian Science or rational medicine, and chose the former simply because it interfered least with Nature and his own preference. Doctors took away his beer and cigars and kept him in bed, upon some absurd theory about vegetations upon his valves; Mrs. Mills told him he had neither vegetations nor valves and could do just as he pleased. So he chose her as a medical adviser—and died suddenly. In the language of the prairies, "Whose funeral is it?"

We certainly are coming to the front as a profession. After consistently abusing us for centuries—mainly because we richly deserved it—literature has actually begun to mention us with approval and even champion our causes. A most unexpected and efficient ally in our campaign against smallpox has just appeared in the form of a novel by no less a writer than Rider Haggard. "Dr. Therne" is a brilliant and skilful *expose* of the antivaccination crusade and its demagogic methods, in which the hero is a leader, and culminates in a masterly description of the fearful epidemic which devastates England, when after twenty years of the "conscience-clause" vaccination has become obsolete. It is a fascinating story as well, and ought to be "a Douglass in the field" for our side—if the "antis" ever read anything except their own lying pamphlets.

A singular "baby-powder" has just been reported from

the town of Blackburn. A physician was called to see a child aged four weeks which he found in a severe attack of colic. Pain had already persisted some days, and upon looking into the mouth he detected a distinct blue line upon the gums. The most careful search and questioning failed to discover any source of lead until he happened to take up a paper of dusting-powder which lay upon the mantel and found written upon it, to his horror, "Powdered White Lead." The nurse, an experienced (!) woman, had been told this was excellent for babies' skins, and purchased it at a drug-store! The nipple of the feeding-bottle was found resting upon the paper. The child recovered, although perhaps its skin is not as brilliant as if the complexion-powder had been continued.

Two cases of the fascinating African "sleeping-sickness" are now in the Seaman's Hospital, both being in Congo natives—a man of twenty-two, and a boy of eleven. Both began to be drowsy in May last, falling asleep over their work, and even over their meals, and the lethargy has gradually deepened until they now sleep all day long, but can be awakened to swallow food. The man can be roused to answer questions but the boy is almost unconscious. This remarkable disease has a latent period of from three to seven years after infection, and a chronic course of from six to fifteen months, but is invariably fatal. It will depopulate whole villages, ploughing through the population at the rate of fifteen to twenty per cent. per annum, until half are dead and the remainder fleeing in terror. No case has ever originated outside of a certain zone upon the west coast of Africa, but in the days of the slave trade negroes would sicken and die of it years after they had been brought to the West Indies.

The abortionist blackmail scheme of "C. J. Mitchell" proves even more gorgeous than was at first suspected. The affair was engineered by three brothers of the suggestive name of Chrimes who not only sent the "official" letters threatening prosecution, but had previously advertised and sold the remedy to their unsuspecting victims, thus securing double profits. From the overwhelming nature of the evidence against them it looks as if they might secure a third and unexpected one. The attitude of the press is being aired in the most edifying manner. Publishers can no longer plead ignorance or oversight for it has been shown in this trial that their rates for such advertisements are double, treble, and even quintuple the ordinary rate. Most useful of all, the case has drawn from the police authorities the public notice that in future all newspapers inserting such advertisements after one warning, will render themselves liable to prosecution for inciting to crime!

What won't the antivivisectionist make capital out of? A public meeting has just been held in London for the purpose of calling attention to the fearful danger to which the community is being exposed by soulless doctors, as illustrated by the outbreak of the plague at Vienna, the "bearing of which observation" as Captain Cuttle remarks, being explained when a resolution was introduced protesting against public money being used to establish a central bacteriological laboratory for London. It was casually remarked that of course

men whose finer feelings had been utterly blunted by inflicting agonies upon dumb guinea-pigs, could not be expected to reck in the least what risks their experiments with the virus of deadly diseases exposed the public to!

#### TRANSACTIONS OF FOREIGN SOCIETIES.

*British.*

**CONGENITAL STENOSIS OF THE PYLORUS—CANCER OF THE LARGE INTESTINE—CHANGE IN THE TYPE OF TYPHOID FEVER IN THE LAST FORTY YEARS—SEQUELÆ OF INFLUENZA—VASCULAR MURMUR OF OBSCURE ORIGIN—SARCOMA AND COLEY'S FLUID—RARE CASE OF MULTIPLE DERMOIDS—HYPERPYREXIA—A RABBIT'S FEMUR USED TO SUPPLANT AN ULNA—CANCER OF THE WHOLE INTESTINAL TRACT—DANGERS OF IMPURE ANESTHETICS.**

At a meeting of the Royal Medical and Chirurgical Society, November 8th, CAUTLEY read a paper on "Congenital Hypertrophic Stenosis of the Pylorus," a condition of importance in its relation to hypertrophy of adults, as well as in its immediate effect on the life of the infant. Since 1841 some twenty undoubted cases of this condition have been reported. The child was usually fine looking at birth, but characteristic symptoms soon made their appearance. Such were: (1) Vomiting, occurring without apparent cause, and persisting in spite of treatment; (2) the absence of bile from the vomited matter; (3) obstinate constipation; (4) marasmus; (5) the presence of a tumor in the region of the pylorus; (6) the absence of abdominal distention except from dilatation of the stomach itself in some instances; and (7) the absence of signs or symptoms of gastritis, and of the more common forms of intestinal obstruction. The influence of inherited disease, family predisposition, and sex were apparently unimportant. Pathologic specimens were shown. In each case the pylorus was about the size of the last phalanx of the little finger. The hypertrophy of the muscular layer threw the mucous membrane into longitudinal folds. In two cases a tumor had been made out during life. If this can be done surgery may be tried, otherwise palliative measures are indicated. It was suggested that the thickening was of a redundant character, Nature, in her attempt to provide a sphincter, rather overdoing the matter. Thompson suggested that it was due to spasm set up by swallowed amniotic fluid, but there was no evidence that spasm of the pylorus can produce hypertrophy.

At the Harveian Society, November 3d, BATTLE read the notes of "Three Cases of Malignant Disease of the Large Bowel," in each of which he had operated for obstruction, with perfect success. In one patient, a man aged forty-four years, with more or less obstruction for three years, there was an intussusception palpable in the rectum, near the apex of which the growth was found to be situated. In this patient, and in a woman aged twenty-nine years, suffering from a growth in the descending colon, colostomy was performed, and the tumor was removed some weeks later. In the third patient, a woman aged forty-five years, the tumor of the sigmoid flexure was removed at the first operation, the

ends of the bowel were brought out in the wound and stitched, and the septum between them was gradually cut away during the following days by means of clamp forceps. The advantages of "short-circuiting" and lateral anastomosis were pointed out, and the speaker said that colotomy ought to become a rare operation if patients are brought in during the early stage of the disease.

PHILLIPS said that typhoid fever has essentially changed its type during the last 'forty' years. Formerly diarrhea occurred in ninety-six per cent. of the cases, but now it is found in only fifty per cent. The lessened severity of abdominal symptoms coincides with the lessened severity of the intestinal lesions, and now it is not uncommon not to find ulceration even at autopsy. Fifty per cent. or more of the deaths at present are due to toxemia, pyrexia, heart-failure, or asthenia. It is necessary to keep up failing cardiac power by tonics, food, and diffusible stimulants. Diarrhea should be controlled by enemas rather than by drugs given by the mouth. Hamamelis is often serviceable in stopping hemorrhage. If perforation occurs immediate surgical assistance should be summoned.

BROADBENT advocated the wider application of the cold bath, as its use on the Continent and in America has undoubtedly done much to diminish the percentage of fatal cases.

At the Bradford Medico-Chirurgical Society, October 25th, KERR showed two patients, mother and son, suffering from a disseminated lesion of the central nervous system, probably toxic in origin, and following attacks of influenza. In each case there was delayed convalescence, followed by failure of sight and power of walking. There was incoordination of muscular movements and difficulty in micturition. The knee-jerks were exaggerated. The patients remained bright mentally, but were inclined to be too emotional. They had suffered from influenza at the same time, seven years ago.

At the Medical Society of London, November 14th, MACKENZIE showed a case of vascular murmur of obscure origin audible at the base of the right lung. The man had been under treatment for four years for tuberculosis, with slight hemoptyses. There was diminished resonance, bronchial breathing, pectoriloquy, and crepitant râles at the apex on the right side. Otherwise the lungs were apparently normal. At the base of the right lung was heard a loud blowing murmur, occupying nearly the whole of the cardiac cycle. The murmur resembled in character that sometimes heard over an aneurism when an artery and vein communicate. The position of maximum intensity was situated over the seventh, eighth, and ninth ribs in the posterior axillary line. The murmur was not much affected by respiration. From its situation it was unlikely that it was due to an aneurism. Perhaps it was caused by an angiomatic growth in the lung or in the liver.

CALEY suggested that it might be caused by a constriction of the vena cava where it passed through the diaphragm.

BATTLE showed a man who had had tumors in the neck, anteriorly and posteriorly, over the sternum and in both axillæ. Microscopic examination had been made,

and the clinical diagnosis of sarcoma confirmed. The patient had taken iodid up to 25 grains three times a day without any good result. He was then treated with Coley's fluid, in half minim and minim doses, for a period of three months, and the tumors entirely disappeared. They were of the spindle-celled variety of sarcoma.

OWEN said the diagnosis of sarcoma did not appear to be certain, and he thought the examination of specimens removed from the living subject are apt to mislead. If it were a sarcoma, why were the glands in the axilla enlarged? It would be very unlikely that a sarcoma of the breast or in its neighborhood would infect the axillary glands. He suggested that it might be a case of granuloma of syphilitic or tuberculous origin.

MOULLIN said that he had examined the tumors and the microscopic sections, and could not conceive that the growth could be anything but sarcoma. He had seen two abdominal tumors disappear under this method of treatment, and while he believed them to be sarcomata, he could not state so absolutely, as no microscopic examination had been made.

OWEN expressed himself as sceptical regarding the diagnosis of sarcoma in such cases. He had seen one subject treated by Coley's fluid for malignant disease of the end of the femur. Later the patient passed into another hospital, and excision of the hip was performed, and the trouble turned out to be tubercular. If this patient had recovered the case would have been set down as a cure by Coley's fluid.

WATERHOUSE had seen the remedy applied in five cases of inoperable sarcoma. Three of the patients suffered from rigors after its administration, and two of them died with hyperpyrexia after moderate doses. In no one of these five cases was there any apparent benefit. Another man had what was considered to be sarcoma of the lower end of the femur. Sections of the tumor were taken and examined in both England and Germany. The pathologists agreed that the growth was a round-celled sarcoma. Some months later suppuration occurred and a piece of necrosed bone came away. The patient recovered without the use of Coley's fluid.

At the Pathological Society, November 15th, LATHAM showed specimens of multiple dermoids found in the abdomen of a woman who had died from peritonitis, set up by the perforation of a dermoid of the ovary. There was one large one attached to the stomach, and many small ones in connection with the stomach, descending colon, and suprarenales. Such a multiple occurrence of dermoids is very rare, and has been attributed by some to malignancy. The speaker, however, inclined to a theory of transplantation.

At a meeting of the Clinical Society, November 11th, MARSH read a paper on "Primary Sarcoma of the Synovial Membrane of the Knee-joint." In September, 1892, he removed from the synovial membrane of the left knee of a man aged twenty-one years, a growth the size of a small tangerine orange. Microscopically it was a mixed spindle- and round-celled sarcoma. The tumor had been in existence for fourteen months. During the next five years recurrences were four times removed. In each in-

stance the disease was confined to the synovial membrane. In December, 1897, a recurrence presented itself posteriorly, and as the knee-joint was pretty nearly useless, amputation was performed. This recurrence, like the others, was confined to the synovial and subsynovial tissues. The disease had not reappeared up to the time of the report.

PITT reported a case of hyperpyrexia in a neurotic woman with bronchiectasis. The patient, twenty-six years old, had suffered four years from attacks of hemoptysis and abundant expectoration of a non-tubercular type. There was marked bronchiectasis and periods of dyspnea lasting for two or three days were of frequent occurrence. In these attacks her temperature in the left axilla was two to four degrees higher than that in the right. At times her temperature on the left side was 114° F., or even higher. The rectal temperature was not extreme. The dyspnea was so great that her temperature could not be taken in the mouth. Prostration was extreme and the pulse was frequently as high as 140. From time to time the patient broke out in a profuse general perspiration. The urine was scanty during an attack, but it never contained any albumin. No explanation was offered for the unusual temperatures, but there could be no doubt that they were genuine, as they were taken every four hours during a period of many weeks, by several different persons, using different thermometers. The patient was so prostrated that she took no notice of the temperature record and any supposition that she raised the mercury by friction on the thermometer would have been ridiculous. In *Guy's Hospital Reports* for 1893 Bryant published extracts of 100 cases of hyperpyrexia. Physiologists have been unable to give the cause of such high temperatures, in one instance up to 128° F.; but there is no reasonable doubt of their occurrence.

LANE showed two patients, a man and a young child, in whom he had successfully made use of the femur of a rabbit to make good the deformity caused by the absence (congenital in the child's case) of the greater part of the ulna. In each case the deformity was remedied and function was restored, the bone taking the place of the normal bone, as was shown by the radiographs. The femurs were fastened in position by fine wires.

At the Pathological Society of Manchester, November 9th, STODDART gave the result of an autopsy upon an alcoholic dement who had died from peritonitis. There was a growth extending along the mesenteric border of the stomach, small and large intestines clear to the anus. It was limited to the alimentary canal. Microscopically it was a spheroidal-celled carcinoma. The anomalous distribution of the growth could be explained in two ways: The first was that the cancer began in the stomach, the rest of the intestinal tract being infected through the food-stream, the infected particles becoming arrested at the junction of the intestinal and mesenteric lymphatics; the second was that the whole growth arose on account of a rod of sub-notochordal mesoblast with dormant hypoblastic characters, assuming those characters in advanced life and giving rise to the epithelial growth.

RAMSAY read a paper on "Pure Anesthetics" at the Society of Anesthetists, November 17th. If chloroform is given in the presence of ligated gas or lamps an unpleasant pungent odor is produced, which attacks the nose, throat and eyes. It is carbonyl-chlorid and results from combustion of chloroform vapor. At ordinary temperatures it condenses to a colorless liquid, and in the presence of moisture it decomposes into carbonic acid and hydrochloric acid. The best test for this impurity is to breath a little of the chloroform, when if carbonyl-chlorid is present, it will irritate the throat. It can be removed by shaking the chloroform with slaked lime and filtering. It has been proved by statistics that the after effects of a chemically pure chloroform are not as marked as those following the use of a less-pure article. Ether, which has been exposed to light and air sometimes has a sticky residue, probably the peroxid of ether. It can best be purified by shaking it with metallic mercury.

## SOCIETY PROCEEDINGS.

### THE SOUTHERN SURGICAL AND GYNECOLOGICAL ASSOCIATION.

*Proceedings of the Eleventh Annual Meeting, Held at Memphis, Tennessee, December 6, 7, and 8, 1898.*

(Continued from page 813.)

DR. LEWIS S. MCMURTRY of Louisville, Ky., read a paper on

#### THE TREATMENT OF CANCER OF THE UTERUS.

He said that the treatment of uterine cancer has not shared proportionately in the great advance of modern pelvic surgery. While other diseases which were long the opprobrium of medical and surgical science and art have been made amenable to surgical treatment, the treatment of cancer of the uterus is practically where it was twenty years ago. Cancer of the corpus uteri is rare in comparison with cancer of the cervix, but not so uncommon as was formerly supposed. Cancer of the cervix originates (1) in the squamous epithelium of the vaginal portion of the cervix; (2) in the cylindrical epithelium of the cervical mucosa, and (3) in the epithelial lining of the cervical glands. Cancer of the body of the uterus originates in the epithelial structures of the endometrium.

The essayist referred to the statistics of vaginal hysterectomy as given by Pozzi in the third edition of his treatise on gynecology, an analysis of which does not strengthen or inspire confidence in the ultimate results of this procedure. He said that claims are being made for the permanent cure of uterine cancer by hysterectomy which cannot be realized. Of all patients having uterine cancer who apply for treatment, only a small proportion are within the scope of a clean extirpation by vaginal hysterectomy. The large number of subjects in whom the disease recurs at the site of operation within a few weeks demonstrates that the operation is in most cases simply a resection. His personal experience with this operation has been discouraging. Vaginal hysterectomy for cancer has never been a favored operation with him. During

the past year he has performed the operation in five cases which were selected as most favorable for permanent cure. In all the patients the disease was discovered early, and, so far as macroscopic evidence could show, it was limited to the uterus itself. The organ was normally mobile. Of these five patients treated by vaginal hysterectomy, two had recurrence—one in the bladder, the other in the vaginal fornix at the cicatrix—within five months from the operation. The patients were under fifty years of age and well nourished. The operation was done with a view of going far beyond the region of probable infiltration, and removing the appendages with the uterus. Based on his own previous experience, and that of other operators, it is doubtful if one of the three remaining patients will be living at the end of three years from the time of operation.

In conclusion, the speaker considered in detail the choice of operation for the several classes of cases of carcinoma of the uterus which are presented to the surgeon for treatment. For advanced cases, when the entire field of evident invasion cannot be removed, he advocated thorough curettage, scraping away necrosed tissues, emptying obstructed pus accumulations, washing out débris, and establishing drainage and antisepsis. Such local treatment will reduce septic intoxication, prolong life, and promote comfort. All operations for radical cure should be limited to cases in which the disease is recognized sufficiently early for thorough removal of invaded structures. This will be best accomplished in the majority of cases by abdominal section and removal of the uterus from above, including liberal portions of adjacent structures, especially the upper portion of the vagina, where implication from the cervix is so often found. While liberal excision of suspicious areas of tissue should be carried out, it will rarely be found necessary to remove the subperitoneal lymphatic glands, since their enlargement has been often found to be inflammatory in character instead of cancerous. The field of vaginal hysterectomy should be limited to the few cases of early diagnosis in which operation can be performed before deep extension of the disease.

DR. WILLIAM L. RODMAN asked the members to give their experience relative to the frequency of cancer in the black and white races. He was rather surprised to hear of the infrequency of the disease in the negro women. According to the last census-statistics of Billings, cancer of the uterus is more common at all ages in the black than in the white race. This is also the experience of Matas, who has examined the records at the Charity Hospital at New Orleans. An examination of all deaths recorded by the Health Department of Louisville for the past thirty years corroborated the same view.

DR. ERNEST S. LEWIS of New Orleans stated that while he had not observed a very marked difference in the relative immunity of negro women to cancer of the uterus, still if his experience is not at fault, he thinks, owing to their uncleanness, their mode of living, and to the more frequent accidents to which they are subject during labor, they are particularly prone to cancer of the uterus. With

regard to the results of all operations for cancer of the uterus, he endorsed everything Dr. McMurtry had said.

DR. VIRGIL O. HARDON of Atlanta said that during his seven-years' connection with the Grady Hospital he had reason to believe that cancer of the uterus was more frequent in negro women than in white women.

DR. HOWARD A. KELLY of Baltimore remarked that he was astounded at the trend the discussion had taken because he had seen dozens of patients with cancer of the uterus who had remained well for a number of years after having undergone removal of the uterus either by the vagina or by the abdomen. He finds carcinoma of the uterus as frequently in negroes as in white women.

DR. J. WESLEY BOVEE of Washington, D. C., said that his experience in the radical treatment of cancer of the uterus has been more satisfactory than that of Dr. McMurtry. He knows of a good many patients upon whom he has operated who have gone on for three years or more without a recurrence of the disease. He has performed three operations, after the manner described by Werder in the *American Journal of Obstetrics* of last winter, and is much pleased. In each case he adopted the abdominal rather than the vaginal route, believing a more radical operation could be performed by this method. He has great hopes for the future treatment of cancer of the uterus by complete abdominal hysterectomy, undertaken early.

He then read a paper, entitled

#### THE USE AND ABUSE OF NORMAL SALT SOLUTION.

The term normal salt solution has been used interchangeably with artificial serum. Various compositions and strengths of the constituent elements of the blood have been used under the name of normal salt solution. According to Kirke's "Hand-Book of Physiology," salt exists in the blood plasma in the proportion of 5.546 parts per 1000, and 6 per cent. is a good practical formula. Other ingredients, i.e., egg-albumen, have been added to the salt which really makes an artificial serum instead of normal salt solution.

Of the five different routes through which it is introduced, the intra-arterial, suggested by Dawbarn, is considered unsafe in all conditions and should *not* be practised. The subcutaneous is the most useful for general use. In emergency work the intravenous method will often be needed in severe hemorrhage and rectal enemata of the solution will be found of great advantage in nearly all cases in which no bowel lesion is to be combatted. In abdominal surgery the peritoneal cavity will be selected for its introduction, and even in vaginal opening of the peritoneal cavity, as in hysterectomy, he has thrown considerable quantities into the peritoneal cavity, the hips being elevated at the time and the peritoneal opening closed directly afterward. The intravenous route, usually the most rapid, may be rendered slower than the subcutaneous by difficulty of finding a vein and successfully introducing the cannula.

The physiologic action of normal salt solution is that of powerful stimulant to the cardiac ganglia and the nerve-centers. The skin, kidney, and intestinal functions are

stimulated markedly and other organs are likewise affected. Osmosis is markedly promoted by it and as a result of increased arterial tension the blood supply to the heart muscle is much increased. It has a hemostatic effect when supplied locally to raw surfaces, lessening oozing by stimulating and contracting the smaller vessels. According to Hayem and others it augments the number of red blood-corpuscles. It is eliminated by the skin, changing the chemical reaction of the perspiration and heavily loading it with salt. The kidneys also carry away an enormous amount of it when large quantities of it have been introduced into the tissues. The lungs remove it freely, it having been noticed in crystals on the lips after its free use. Autopsies after its use under the skin have shown a considerable quantity of it in the intestines, demonstrating that it is thrown off by this route.

In surgery the principal indications for its use are shock, hemorrhage, and sepsis. In shock it should be employed early, on the table during operations, or even before the operation has been undertaken in bad cases, or after operation in milder ones. Severe hemorrhage is to be treated in the same manner, though only after the flow of blood has been checked. If the hemorrhage be severe, the intravenous route may be employed, it being about the only indication for this method. In the author's abdominal work he almost invariably leaves a considerable quantity of salt solution in the peritoneal cavity. Its salutary effect is produced by its action on the abdominal viscera with which it comes in close contact. To prevent adhesions in the pelvis one or two liters suffices. It hastens absorption of stray or concealed blood-clots, septic foci, or escaped fluids by carrying them well up into the abdominal cavity in cases of pelvic surgery. In hemorrhage it is probably best to infuse small quantities and often rather than in one large amount.

Judging from the reports of experimenters the use of normal salt solution is not a harmless procedure. It is contraindicated in such conditions of the blood as hemophilia, dyscrasias, deficient fibrin, etc. It would seem not unreasonable that such a strong stimulant, coupled with its dilatation of the blood-vessels, when used in large quantities, and especially when thrown directly into them, would be very harmful in such conditions of the circulatory apparatus as myocarditis, pericardial effusion, atheroma, arteriosclerosis, cardiac degeneration, bad valvular lesions, thrombosis, and recent cerebral apoplexy. Chronic diseases of the lungs, kidneys, or liver, especially if malignant, are apt to be aggravated by it. Active hemorrhage in any location is aggravated by it. The presence of toxins in the blood has been found to retard the elimination of normal salt solution, and for that reason small quantities at a time only should be employed.

It is necessary to avoid certain accidents and mistakes in using normal salt solution. One must know the solution is sterile when it enters the tissues of the body, except by the rectum, in which case it is of no moment. Avoid air bubbles entering into blood-vessels or cellular tissue. The fluid must be of a sufficiently high temperature when it reaches the body. Chills occur from a cold

solution and are dangerous to very weak patients. The vessel containing the solution as well as the tube and needle conducting it must be aseptic and thoroughly perivious; the tube should have a glass window that the rapidity of the current and the presence of any foreign body may be noted. When the solution is to be introduced through the skin, either into cellular tissue or a vein, the local surface should be cleaned as much as the limited time will permit. Probably not more than a half liter should be injected into the tissue through one puncture, as localized necrosis and a septic inflammation have resulted from overdistention of the tissue spaces. Ordinarily not more than one ounce per minute should be injected into tissue or vein. Pulmonary edema, dyspnea, headache, vertigo, mental excitement, delirium, hallucinations, severe pain in the left side occur from overdistention of veins from a too large infusion.

#### THE CONSERVATIVE TREATMENT OF THE DISEASED OVARY

was the title of a paper by DR. JOSEPH TABER JOHNSON of Washington, D. C.

In the early part of the present decade quite a conservative wavelet swept over the country, and considerable harm was done to pelvic and abdominal surgery in the mild and gentle name of conservatism. Incomplete conservative operations were performed, some of which had to be completed later on by radical operations. Some of the men who claimed to be the most conservative, and attracted the timid doctors and frightened patients, were actually removing more ovaries and tubes than many of their so-called radical friends.

So much has been learned by accumulating experiences, as the domain of the gynecologist has undergone so much expansion, that real conservatism is gradually gaining ground over real radicalism to such an extent that he who presents ovaries and tubes or a fibroid uterus to a modern up-to-date medical society, has to state very good reasons why he sacrificed these important organs in their entirety to escape criticism and possibly censure. Sacrificial surgery is gradually giving way to more conservative and humane methods. He believes there is a maxim in general surgery in favor of saving every inch of the human body possible, and another that it requires a higher order of skill to save a mutilated or diseased member than it does to cut it off or to cut it out. With his present experience in abdominal surgery, he is free to confess that he can now save ovaries and tubes which he formerly thought it necessary to totally remove. The increasing skill of our abdominal surgeons and their accumulating experience in actual conservative work go to show that we are approaching nearer to that true conservatism which is the offspring of increased skill and experience. In abdominal surgery it requires a higher order of skill and a greater experience to save an organ or part of an organ than it does to remove it.

The president's address was delivered by DR. RICHARD DOUGLAS of Nashville, Tenn. He made a departure from the usual or stereotyped addresses, and selected for his subject

## ACUTE GENERAL PERITONITIS.

Before considering his subject proper, he spoke of the growth of the Association and the excellence of its scientific work, saying that the Association owes its existence and high standing to the indefatigable efforts of DR. W. E. B. DAVIS, the permanent secretary.

A bacteriologic classification of peritonitis is beset with many difficulties, and while the speaker was free to admit that for all practical purposes peritonitis is of bacterial origin, yet there occurs a respectable percentage of cases in which the most rigid examination fails to disclose the presence of micro-organisms. Hartmann and Moreau reported in detail such a case recently. Of 110 cases bacteriologically classified by Flexner there were 12 cases which he was obliged to consign to the idiopathic group. It is true that in all of these patients there existed conditions predisposing to peritonitis, such as cardiac, renal, or hepatic disease. In the intensely septic mycotic form of peritonitis the absence of bacteria may be accounted for by the fulminant type of the disease, death occurring from intoxication before the colonies are well established. Any effort to individualize the effect of a specific bacterium, to connect its presence with a definite pathologic phenomenon and characteristic symptomatology is as yet futile. Mikulicz avers that all forms of peritonitis run the same clinical course regardless of the bacteria that cause it. There is a law laid down by Maloz by the effect that if the peritonitis is of intestinal origin, the colon bacillus will show it; if it is of uterine origin, that is, connected with abortions or labor, the streptococcus is found. It is asserted that the colon bacillus constitutes nine-tenths of the bacteria of the digestive tract, the colon is its natural habitat, but its behavior upon gaining entrance to the peritoneal cavity depends upon many circumstances, and this bacillus has many morphologic conditions, many forms and stages. The constancy of its presence in peritonitis, since the demonstrations of Welch and others of its capacity of transmigration through the bowel, has led many to attach to it great significance as an etiologic factor, but its association with other forms of micro-organisms renders the first proposition of Maloz null and void. If we interpret Maloz's law correctly, the absence of streptococci would eliminate the possibility of peritonitis being of puerperal origin. In rebuttal of this idea, Dr. Douglas quoted from Winckel, who says: "Kroenig examined all parts of the uterus of a woman dead from infection, and found not only the superficial thrombi at the placental site thickly filled with bacteria, but also the serous lining of the peritoneum." This case shows that a woman may have a peritonitis following abortion without streptococci, and it further shows that the colon bacillus without an intestinal lesion may produce a fatal peritonitis. No doubt too much importance has been ascribed to the colon bacillus, and it is interesting to note that Tavel, who was among the first to emphasize the pathogenic powers of the bacillus coli communis, thinks now the bacillus of minor importance in the etiology of peritonitis. He holds, further, that the very name of the bacillus coli should be considered merely a collective name of many varieties of bacteria.

The conclusions that may be drawn from an etiologic study of peritonitis may be thus summarized: Traumatic peritonitis, especially the post-operative variety, is essentially a grave condition, not only because there is immediate or primary inoculation of the peritoneum, but because the conditions are all favorable for germ-culture and dissemination. Peritonitis by continuity may become general and prove rapidly fatal, but this is not the rule except in puerperal cases. Contrary to the expressed opinion of more than one writer, there is nothing peculiar about the peritoneum, of the cecum, or appendix, or the true pelvis, which accounts for the more frequent localization of inflammation in these regions than in other areas of the abdomen. The method of invasion, the activity of the process and resistance of the patient alone determine the local or general type of peritonitis. Visceral perforation, whether traumatic or pathologic, is an ideal condition for germ culture and the elaboration of toxins. Their rapid absorption and general diffusion throughout the peritoneum sufficiently explain the grave state into which the patient is precipitated. It may be asserted that the clinical course and pathologic expression depend largely upon the nature of the exciting cause, the character of the preexisting disease or injury, and the mode of invasion.

## WHEN SHOULD WE OPERATE FOR APPENDICITIS?

DR. A. M. CARTLEDGE of Louisville read a paper on this subject. He drew the following conclusions: (1) Probably ninety-eight per cent. of the patients who die of acute appendicitis without operation have the fulminating variety of the disease. Operation to be of service must be performed during the first twenty-four hours, better the first twelve. (2) In view of the fact that we have no means of knowing the probable course of a given attack of appendicitis, operation, when possible, should be performed within the first twenty-four hours after the onset of symptoms. (3) Patients seen after the third day should not be operated upon until over the attack, or until purulent formations, if such take place, have been walled off, and the patient practically rid of general sepsis. An exception to this rule is the rupture of an appendiceal abscess into the peritoneal cavity, a very rare accident, when abdominal section should immediately be performed. (4) Probably as many patients recover from general septic peritonitis by the use of stimulants and purgatives as do by operations. In either event, if it is a case of true general septic peritonitis, the mortality will not be far from ninety-five per cent. If the patient is operated upon at all, no attempt at general cleaning of the cavity should be practised. The surgeon should quickly assist Nature to take care of the patient by removing the foci. To do more is to add the shock of an unbearable operation to an already nearly exhausted vitality. (5) Subject to interval operation, patients who have suffered unmistakable attacks of the disease. (6) Do not operate too soon after a severe attack with many adhesions; the operation will be greatly simplified by waiting a few weeks longer. In the meantime, keep the patient upon light diet and little exercise. Patients do

not usually have a recurrence until the adhesions or splints have been removed by absorption. The mortality from interval operations should not be more than one per cent.

DR. GEORGE H. NOBLE of Atlanta, read a paper on  
URETERAL ANASTOMOSIS.

He gave an analysis of thirty cases collected from literature, and divided them into two classes: First, ureteral anastomosis, or union of the ureter end to end or end to side; second, ureteral implantation into the bladder. On July 2, 1898, the essayist ligated the ureter with the ovarian vessels and Fallopian tubes in a case of large extraperitoneal fibroma. This was the very first ligature applied in doing hysterectomy. The bladder end was split about three-eighths of an inch, and as much of the mucous membrane as could be drawn out was cut away; then the upper or kidney end of the ureter was invaginated into it, a mattress suture being used for the purpose. The split was then closed with fine sutures, making a snugly fitting cuff around the opposing end with no mucosa intervening. Small silk was used to stitch the raw edge of the inferior segment around and to the sides of the upper section. A peritoneal cuff was thrown around the joint thus made and the ureter buried behind the peritoneum. The entire work was conducted with the aid of a ureteral catheter, which had been introduced through the ureter into the bladder and drawn out of the urethra with a pair of forceps. The upper end was passed into the kidney end of the ureter. This served a useful purpose, the entire manipulation being greatly facilitated and preventing obstruction of the ureter by crowding down the cut end of the mucosa just below the line of union. This patient had suffered from absorption of pus for a number of weeks from double pyosalpinx, was emaciated and thoroughly septic. Her temperature just before going upon the operating-table was 103° F., and had been running equally as high during the time she had been in the hospital and perhaps longer. Her pulse was 130 per minute, weak and thready. Thus this anastomosis was done under unfavorable conditions, but successfully.

In October, 1898, he did a successful resection of the left ureter in a case of extraperitoneal extension of sarcoma of the ovary. About one and one-half inches of the duct was removed and the ends united as above. The peritoneum was stripped from the entire left half of the pelvis. The bladder was separated from the upper portion of the vagina, and also from the horizontal ramus of the pubic bone, and drawn up to the left side to the ileo-pectineal line to cover or bury the ureter, and fastened with a silken suture. In this instance the ureteral catheter was introduced on a stilette and being stiffened by it passed directly out of the urethra from the ureter; thus the use of forceps was unnecessary to fish it out of the bladder. Abdominal and vaginal gauze-drains were used. There was no leakage.

There are several features necessary to success in performing ureteral anastomosis aside from thorough asepsis: (1) Perfect coaptation or invagination. This must be

done in such a way that no mucous membrane can slip between the two ends of the ureter. (2) The ureteral artery should be preserved in its continuity to the ends of the ureter. If this vessel be destroyed when the ureter has been dissected loose from its attachments, it will perish beyond the point where it ceases to receive its blood supply. The ends of the ureter should be cut back to the point where the artery is intact lest under diminished blood supply and tension it should perish. (3) All strain or tension must be relieved. Should union occur by first intention, the parts will separate as soon as the sutures cut out or are released. (4) There must be no obstruction to the flow of urine.

#### CARCINOMA OF THE BREAST.

DR. WILLIS F. WESTMORELAND of Atlanta read a paper on this subject, in which he said that carcinoma now presents even a more serious problem than formerly on account of its rapid increase. The proportionate mortality from cancer is four and a half times greater now than half a century ago. No other disease can show anything like such an immense increase. According to statistics, two out of every five cases of carcinoma in the female are of the breast. More than three-fourths of all the tumors occurring in the breast are carcinoma, or, to be exact, of 637 tumors more than 503, or 83.20 per cent., were carcinoma, leaving only 107, or 16.79 per cent. to represent all other forms of neoplasms. The essayist follows the Halsted method in operating for carcinoma of the breast. He believes, however, Dr. Joseph Bloodgood was the first to demonstrate the advantages of completely cleaning out the postero-internal subscapular region by the supraclavicular route. The results of the Halsted operation, in the opinion of the essayist, depend upon the ability of the individual operator, the earliness in seeing the case, and his closeness in following Halsted's technic.

DR. I. S. STONE of Washington, D. C., contributed a paper on

#### THE RARITY OF OVARIAN CYSTS IN NEGRESSES.

After several years' experience in a hospital for women, where a large number of negroes are annually treated for gynecologic diseases, and where cases of uterine myomata are frequent, the writer has noticed the extreme rarity of ovarian neoplasms, and especially of the multilocular variety in this race. He addressed letters to all the members of the Association and to several other prominent surgeons elsewhere, and of the large number who replied to his inquiry there was almost universal acquiescence in the position taken from him, save by one important medical center, the city of New Orleans. According to the records from the hospitals of that city, cysts of the ovary of all classes are rather more frequent in the negro than in the white. Leaving aside this one source, the author advanced overwhelming testimony favoring the view that ovarian tumors are exceedingly rare in the negro race. He made a careful distinction between multilocular and unilocular cysts, because there can be no doubt about a diagnosis at the time of operation when a multilocular cyst is found. It is otherwise

with parovarian cysts, or those of the broad ligament, etc., which are perhaps classified as ovarian, and their removal called ovariotomy in hospital reports, or operationists, when, strictly speaking, they are not ovarian tumors. He has frequently operated for dermoid, papillomatous, parovarian, and broad-ligament cysts in negroes (although most of these in mixed cases), but has not seen a multilocular ovarian cyst.

DR. F. W. PARHAM of New Orleans read a paper on  
**RESECTION OF THE THORACIC WALL FOR TUMORS GROWING FROM THE THORACIC SKELETON.**

He reported two such operations of his own with successful results. Both operations widely opened the pleural cavity and the lung collapsed in both. In the first the collapse was relieved only when the great pectoral muscle was brought down and sutured to the rent in the pleura. In the other signal service was rendered by the Fell-O'Dwyer apparatus for maintaining regular respiration. He believes the perfection of this apparatus and its application in skilful hands will greatly aid in the developing of the surgery of the chest. He had collected reports of all cases operated on up to date with a mortality of twenty-five per cent. for the intrapleural operations for tumors of the chest wall.

DR. W. L. ROBINSON of Danville, Va., presented a **CLINICAL REPORT OF THE USE OF ANTISTREPTOCOCCIC SERUM IN SEVEN CASES OF PUERPERAL SEPTICEMIA, FOUR OF POST-OPERATIVE SEPSIS, THREE OF SEPTIC CELLULITIS, AND TWO OF ERYSPELAS.**

The use of antistreptococic serum in puerperal fever comprises seven cases treated by him, the patients having high fever, rapid, weak pulse, characteristic breath, chilliness, nausea, insomnia, and pelvic tenderness, with scanty, fetid lochia. From 12 to 20 c.c. of the serum was injected after the usual treatment had failed, including irrigations, intra-uterine and vaginal, sealing abrasions of the cervix and perineum, saline injections, purgatives, stimulants, etc., with prompt improvement in the general condition, rapid fall of temperature, lowering of pulse-rate, and complete recovery. The effect was manifest in from eight to sixteen hours in the majority of cases. In the three post-operative cases of sepsis, seemingly hopeless, all the usual treatment failing, the serum in twelve hours transformed every symptom of high fever, chilliness, rapid, weak pulse, diarrhea, etc., into a hopeful condition, resulting in rapid recovery. Pain subsided in twelve hours, fever in eight hours, diarrhea in forty-eight hours. One case was a vaginal hysterectomy; the second patient was operated on for the removal of pus-tubes, and the third had a vaginal hysterectomy. Two cases of septic cellulitis consisted of suppurative cellulitis of the hand, commencing in a finger, one from injury from a rusty nail, and the other from the spur of a cock. Both had been treated by general alterative tonics and locally by improved antiseptic measures, but the disease progressed daily, involving new tissue till the serum was used, which promptly arrested the progress of the disease in both cases and saved the hands. A third case was a gunshot wound of the ankle, with marked septic prostra-

tion, chills, diarrhea, etc., which was dissipated promptly by the use of the serum so far as fever and general septic symptoms were concerned. There were two cases of erysipelas, one in a patient sixteen years of age, due to an abscess following extraction of a tooth, discharging at two points on the neck. Redness and swelling covered one-half of the face, nose, and head. Temperature 104.4° F., pulse 140, delirium, vomiting, chilliness, etc. Ten c. c. of the serum was injected at 9 P.M., resulting in fall of temperature to 100° F. Next morning there was complete arrest of all symptoms, followed by prompt recovery. The second case was one of nephritis. The patient had puffed eyelids and face. Erysipelas of the thigh developed, which became hard, red, and shiny. There was marked delirium. Two injections during twenty-four hours rendered the patient convalescent in thirty-six hours. The serum used was that of Parke, Davis & Co.

DR. J. B. MURFREE of Murfreesboro, Tenn., followed with a paper on

#### PENETRATING WOUNDS OF THE CHEST.

Penetrating wounds of the chest vary in their extent, character, and severity. They vary from a small perforation with a delicate knife-blade or small bullet, merely separating the tissues without inflicting any serious injury to a fearful laceration with great loss of tissue or serious damage to an organ produced by a large knife or a Minie ball. Wounds penetrating the chest are dangerous from hemorrhage, from the admission of air into the pleural cavity, producing collapse of the lungs, from emphysema, from empyema, from septicemia, and from exhaustion. When a large vessel is injured death quickly ensues from loss of blood; while injury to smaller vessels may endanger life and even prove fatal from continued or frequently repeated hemorrhage.

DR. GEORGE S. Brown of Birmingham, Ala., reported a case of vesicorectal fistula of eight-years' standing, the result of perineal lithotomy, with cure after ten operations.

The following officers were elected for the ensuing year:

President, Dr. Joseph Taber Johnson, Washington, D. C.; vice-presidents, Drs. F. W. Parham, New Orleans, and W. L. Robinson, Danville, Va.; secretary, Dr. W. E. B. Davis, Birmingham, Ala.; treasurer, Dr. A. M. Cartledge, Louisville, Ky. To fill vacancy in the Council—Dr. L. McLane Tiffany, Baltimore, Md. Place of meeting, New Orleans; time, to be determined by the secretary with advice of the Council. After the presentation and adoption of resolutions of thanks, the Association adjourned.

#### REVIEWS.

**A TREATISE ON APHASIA AND OTHER SPEECH DEFECTS.** By H. CHARLTON BASTIAN, M.A., M.D., F.R.S. New York: D. Appleton & Company, 1898.

THE literature on aphasia is enormous. Perhaps no other symptom in neurology has received the attention, and has been the object of so much discussion as those

anomalies and perversions of the receptive and expressive functions of the brain involved in language. Dr. Bastian has attempted in the seventeen chapters which comprise this book to present the best established facts relating to these perverted functions of speech.

The book, after a general physiologic and psychologic introduction, takes up the consideration of the existing relations between thought and language. The following chapter is devoted to classification, after which the defects of speech and writing due to structural or functional degradation of motor-centers are considered. The effects of structural and functional disabilities of the various centers concerned in language are then reviewed. This part of the book was outlined in the author's Lumleian Lectures before the College of Physicians of London in 1897. Paraphasia and paraphagia are considered in a chapter, as are the defects due to lesions of the commissures between the different cortical centers involved in the mechanism of language. A very interesting chapter is given to the consideration of the capacity for exercising civil rights. An adequate consideration of the etiology, diagnosis, and prognosis of speech-defects follows, and the work concludes with the discussion of the treatment of these perverted conditions.

To say the least, when one deals with these disturbances he is bound to fall into theory or speculation, or both. There are few works which deal with aphasia which are deprived of these defects, for such they must be called when they appear in a purely scientific treatise. If writers would pay more attention to the clinical and pathologic data than to the purely metaphysical, much of the obscurity with which these "speech" defects are veiled would be removed. Dr. Bastian has brought forward cases where he could to assist in establishing facts which should serve as a basis for speculation. It is needless to say that anything coming from Dr. Bastian's pen is deserving of study and attention, and this work, perhaps, as much so as any of his other contributions to neurologic science.

**LABORATORY WORK IN PHYSIOLOGICAL CHEMISTRY.**  
By FREDERICK G. NOVY, Sc.D., M.D. Second edition, revised and enlarged. Ann Arbor: George Wahr, 1898.

THIS work, as its name implies, is a laboratory manual, and although its first edition appeared only a few years ago, nevertheless this second edition is most welcome on account of the enormous advances which the subject of which it treats has made during the interval.

The chapter of principal interest, that on Proteins, contains a classification which differs somewhat from the recent one of Neumeister and that of Chittenden, but the one before us is well subdivided, and its three major divisions are most clearly differentiated. Not sufficient emphasis can be employed to indicate the value of quantitative estimations in the clinical examinations of physiologic secretions, and the chapter which treats of this subject might be of use to many in the active practice of medicine. Gross clinical methods, as they are at present understood by the physician, show us but little of what actually is

present in these materials, and it is only by the most carefully performed quantitative analyses that we are enabled to judge the change in the condition of the patient under treatment. The examination of gastric juice, blood, milk, urine, pancreatic secretion, bile, and saliva is fully explained, and the quantitative determinations of the constituents of the first four are given in detail.

A table for the examination of urine, list of reagents and a short index completes the work, which might be recommended to any one working in this special department of chemistry.

#### ATLAS OF METHODS OF CHEMICAL INVESTIGATION.

By DR. CHRISTFRIED JAKOB, formerly First Assistant in the Medical Clinic at Erlangen. Authorized translation from the German. Edited by AUGUSTUS ESHNER, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Philadelphia: W. B. Saunders, 1898.

THIS work has no merits over its numerous predecessors of like character, save the abundance of well executed illustrations whence it derives its title. A very conventional word picture of the diseases accompanies the illustrations, of which there are 68 full-sized plates. The latter half of the work is devoted to methods of clinical examination. Differential diagnosis, so intensely significant to the medical neophyte in grasping the essential differences in diseases, is much neglected. In attempting still further to condense into this hand-atlas the subjects, urinalysis, blood examinations, gastric analysis, and clinical bacteriology, the author has erred. The epitomized style adds both to the difficulty of reading and of memorizing.

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#### For Cardiac Weakness after Scarletina.—

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	Vini xeric . . . . . q.s. ad. 3 iii.	

M. Sig. One to two teaspoonfuls 3 times a day after meals for a child of 3 to 6 years.—*Freyberger*.

#### For Dyspepsia with Flatulence.—

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	Tinct. valerianæ { aa . . . . .	
	Tinct. nucis vomice { aa . . . . .	
	Cbloroformi . . . . . gtt. xx-xi.	

M. Sig. Ten to 20 drops in water before meals.

#### For Rheumatic Gout.—

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	Sodii nitratii { aa . . . . .	3 iiss
	Potassii iodi { aa . . . . .	
	Oxymel colchici . . . . .	3 iss
	Syr. rad. bardanae . . . . .	3 v.

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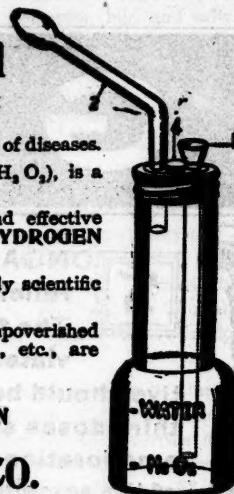
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